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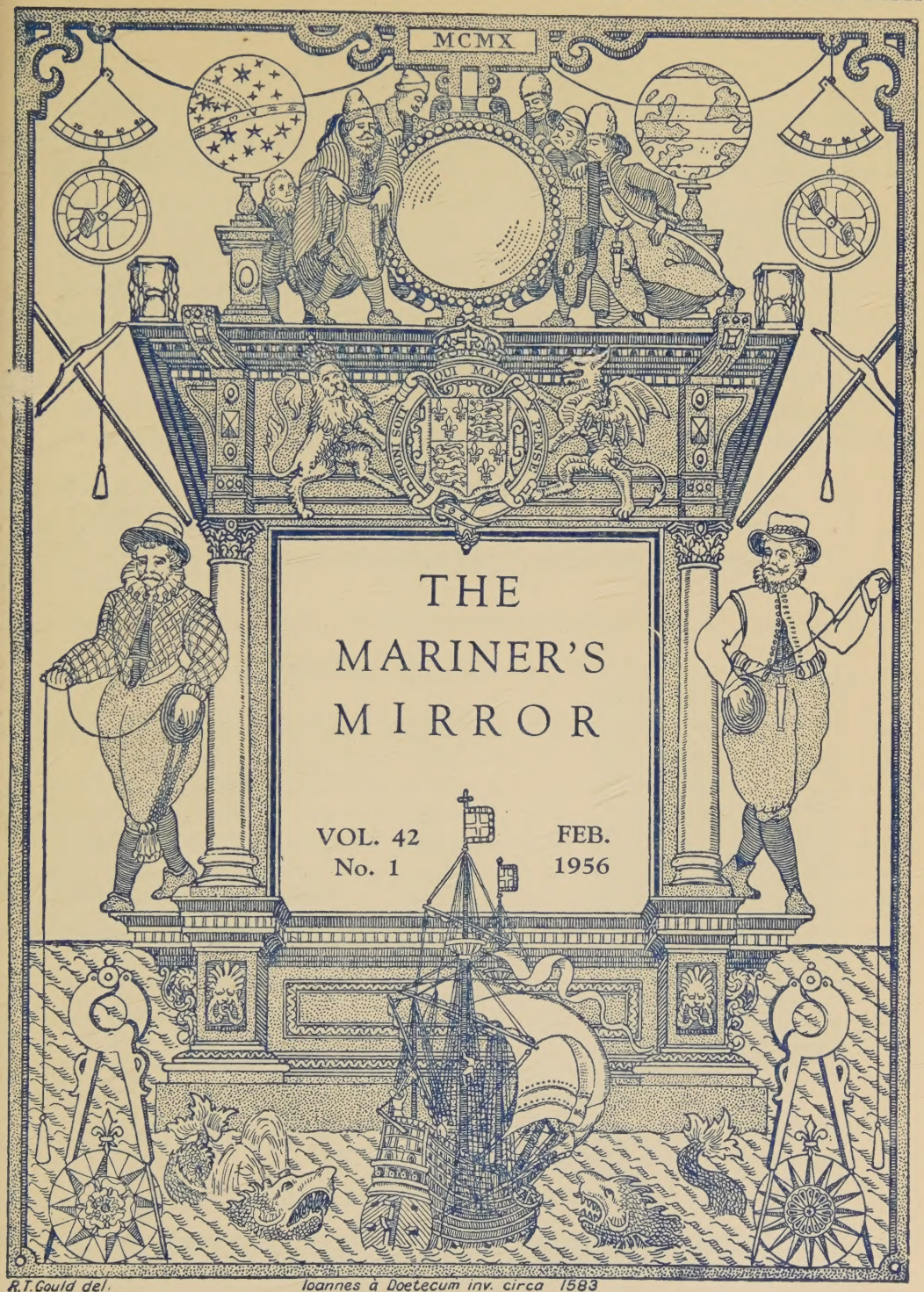

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The aim of the Society being to arrive at true conclusions through free discussion, it is distinctly to be understood that the Editor is not held responsible for statements made in the *Journal*.

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Names of ships should be underlined to denote *italics*, and not written within inverted commas.

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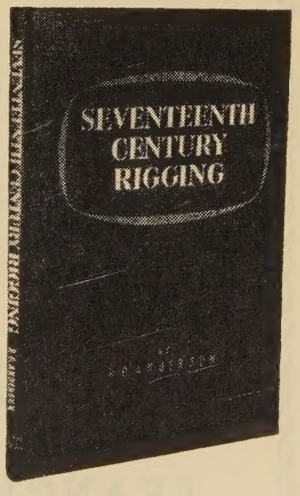

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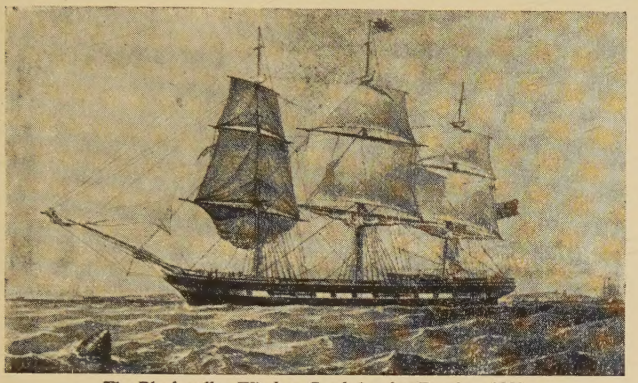

The Blackwaller *Windsor Castle* leaving Bombay 1859

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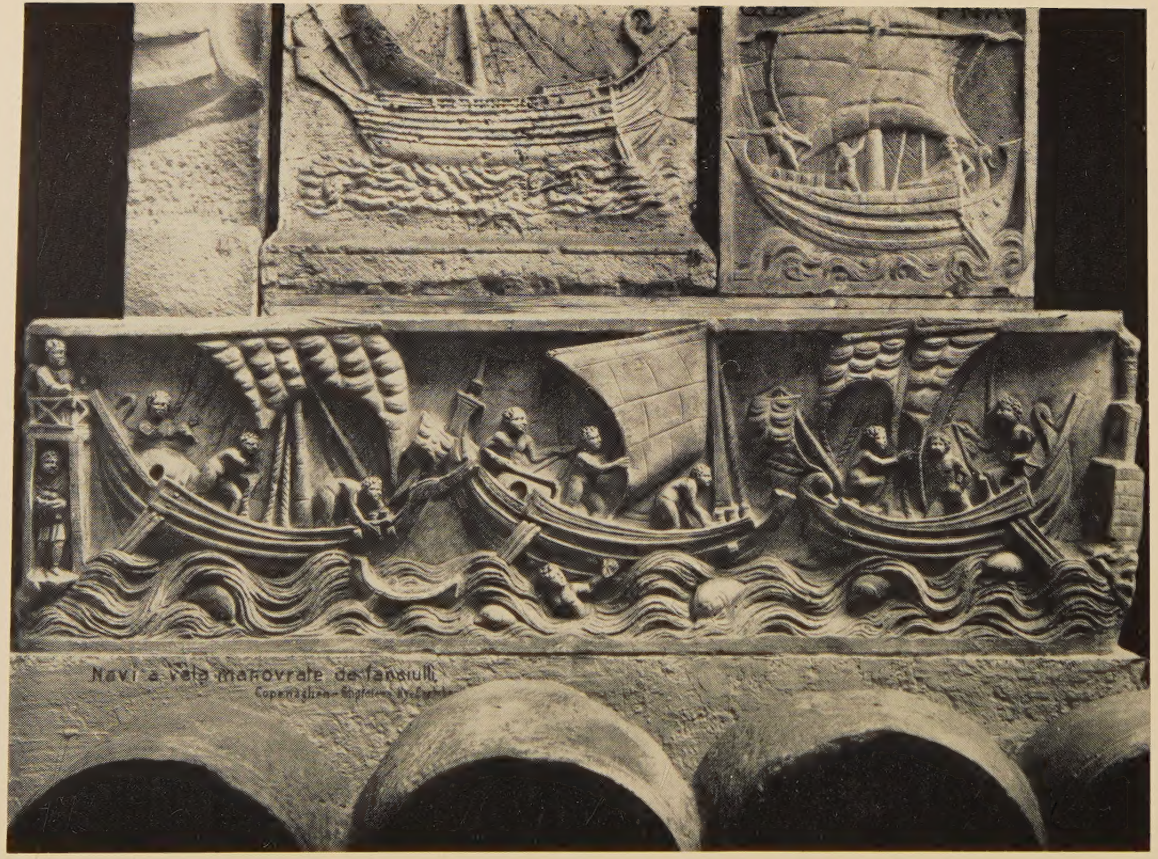

From a sarcophagus probably from Ostia and now in the Ny-Carlsberg Glyptothek in Copenhagen.

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OBITUARY

We record with great regret the death of our member Captain Learmont. James Learmont went to sea in 1887 before he was 12 years of age with his father in coasting schooners, and by dint of hard work and study, found himself at the age of 24 Master of a barque bound out round the Horn. In his day he was known for his fast passages and made a scientific study of speed under sail. He was a member of the Nautical Research Society for some years and the author of *Master in Sail*, a book which was reviewed in the *Mariner's Mirror* of July 1951.

G. WORCESTER.

FORE-AND-AFT SAILS IN THE ANCIENT WORLD

By Lionel Casson

THE historians of ships and the sea are unanimously of the opinion that the mariners of the ancient world knew only the squaresail. The lateen they generally attribute to the Arabs and date its appearance in Mediterranean waters, not before the great conquests that followed in the wake of Mohammed. They place the spritsail and the gaff-headed sail no earlier than the fifteenth and sixteenth centuries, and give credit for their discoveries to the Dutch. This whole picture must now be changed: there is incontrovertible evidence to show that many centuries earlier, ancient sailors were using the lateen and spritsail.

It was a common practice among the Greeks and the Romans to decorate tombstones with pictorial bas-reliefs. These show the deceased sometimes saying farewell to his family, sometimes in the act of carrying on his trade, occasionally in the grip of the circumstances that caused his death. We see a doctor delivering a child, a soldier in full regalia at parade rest, a tailor busily sewing, a merchant on the bridge of his vessel, a fisherman at the helm of his skiff. It is a series of scenes on the grave monuments of humble followers of the last two trades that enables us to make the necessary drastic revisions in the currently accepted version of the history of sails.

Pl. I, figs. 1–3, are photographs of three ancient tombstones. The first was discovered near Thessaloniki in the north of Greece, the other two in Asia Minor, not far from the ancient site of Troy. The style of the sculpturing and of the letters of the epitaphs leads us to date them in the first or second centuries A.D. All three show vessels which—there is no question about it—carry a spritsail. In the first, the ship is getting under way, the poles are bare and the characteristic diagonal spar of this rig, with the halyards running from its tip to the mast and possibly the sail furled about it, is fully visible. In the second, showing a vessel moving along smartly, we are standing as it were to leeward and hence the spar is not visible but the set of the sail gives away the fact that the boat is sprit-rigged. Only a sprit could hold up the peak and leave the head slack in the fashion shown; a gaff would have given a taut line from peak to throat. The third is even more interesting, for to my knowledge it is the earliest recorded instance of sailing

wing-and-wing. The ship depicted has two spritsails. The main has been run far out to port, as one does when the wind is dead astern. A smaller sail has been run out to starboard. This rig, although limited in use to running free, must have been particularly effective on such a course.

A sarcophagus of the third century A.D., now in the Ny-Carlsberg Glyptothek in Copenhagen, provides a fourth clear example of the sprit. On one side is a sculptured representation of three vessels under way at the mouth of the harbour of Ostia, Rome's great port.[1] The two on either side carry squaresails of a type common among the ancients. The one in the centre has a very different sort of rig. One scholar has argued that it is the earliest example of the gaff-headed sail.[2] Unfortunately he worked from the only photograph (Frontispiece) that was available in publications. On the original I found the diagonal sprit (Pl. II, fig. 4). Like all the nautical details in the scene it was carefully and accurately carved, but had been hidden in the photograph by the leech of the sail. In the picture, moreover, we can make out some of the rigging. The sheet is hidden behind the starboard bulwark but the vang for trimming the peak is clear. It seems to consist of a line made fast to the deck and led around a block on the peak and down to the deck again.

A miniature from the hand of the great Flemish painter Hubert van Eyck, dated to 1420, which shows St Julian sailing in a sprit-rigged boat, has up to now been put forth as the earliest appearance of this sail.[3] The tombstones and sarcophagus I have described prove that it was known over a thousand years earlier. They reveal, moreover, that it was no rare local rig; one saw it in the harbours of Asia Minor, north Greece and Rome. Perhaps the Greeks invented it themselves (we cannot attribute it to those notorious landlubbers, the Romans), perhaps they borrowed it from others; only further evidence can decide the question. And we may possibly never know what happened to it between the third century A.D. and 1420. It may actually have fallen completely out of use and the Dutch may then be credited with a rediscovery.

The spritsail was not the only fore-and-aft rig that the ancients had. They knew the lateen as well. Scholars have varying views on the history of this sail. Most incline to credit its discovery to the Arabs, although recently

1 I have discussed this relief in detail in 'A Sea-Drama in Stone', which will appear in a forthcoming issue of *The American Neptune*.

2 F. Miltner, 'Schiffsdarstellungen auf einem Relief', *Mitteilungen des Vereines klassischer Philologen in Wien*, Vol. III (1926), p. 75, repeated in Pauly-Wissowa, *Real-Encyclopädie der classischen Altertumswissenschaft*, s.v. 'Seewesen', Supplementband 5, column 944 (Stuttgart 1931).

3 The most detailed treatment of the subject is Nunzio Maccarrone's 'Saccoleva (vela a) Tárchia o (a) Tarchía', *Archivio glottologico italiano*, Vol. XXVIII (1936), pp. 33–5, 43.

Fig. 1

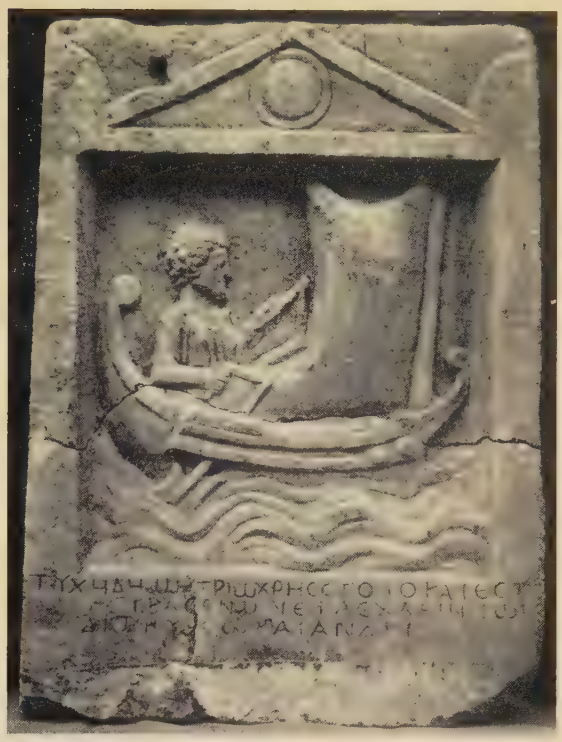

Fig. 2

Fig. 1. From a tombstone discovered near Thessaloniki and now in the Archaeological Museum, Thessaloniki. Unpublished photograph furnished by courtesy of the museum.

Fig. 2. From a tombstone discovered near Lampsacus and now in the Archaeological Museum of Istanbul.

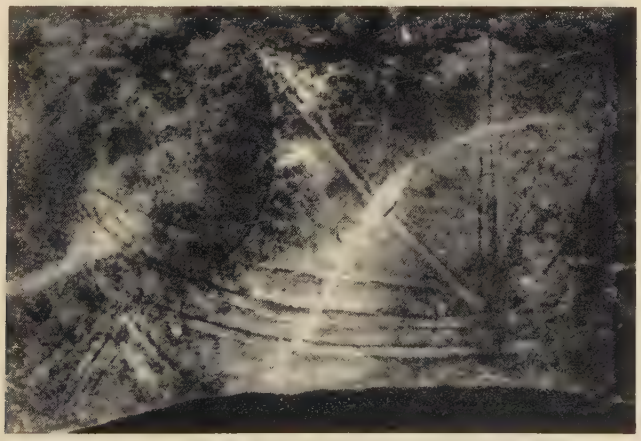

Fig. 3. From a tombstone found in Çemberli-Taş, and now in the Archaeological Museum of Istanbul.

(*Facing p.* 4)

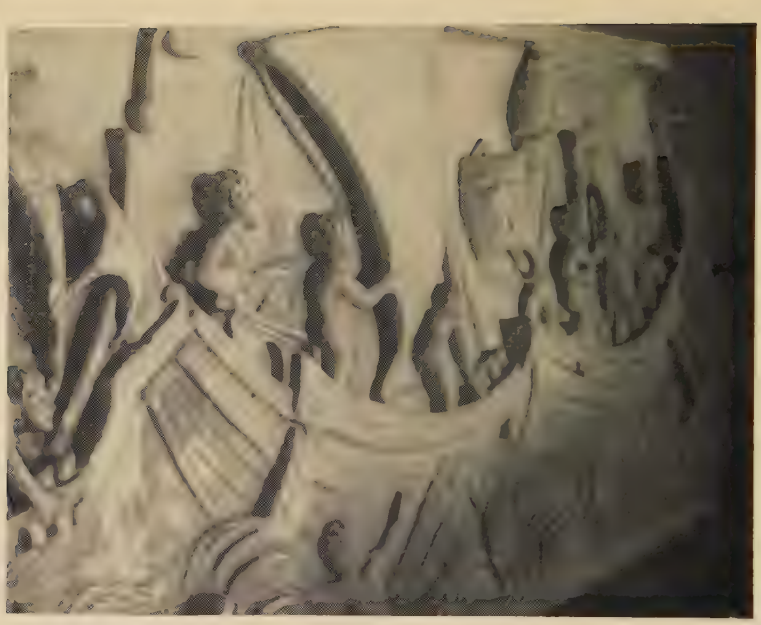

Fig. 4. Detail of frontispiece.

Fig. 5. From a tombstone found at Eleusis and now in the National Museum, Athens.

there has been a tendency to seek its origin in the Far East.[1] Over a century ago Auguste Jal, that great student of nautical antiquities, expressed his strong opinion that the Greeks and the Romans knew this sail, although he could not produce firm evidence to prove it.[2] The proof is now available.

Pl. II, fig. 5, shows a relief carved on the tombstone of a fisherman who, born in Miletus in Asia Minor, ended his days near Athens some time in the second century A.D. He stands with his son in his boat. Over the two of them rises the gracefully curving spar of its lateen sail.[3] We again do not know whether the Greeks invented or borrowed this rig. But here is indisputable proof, antedating by many centuries the earliest appearance elsewhere, that they used it.

The spritsail and lateen, then, were to be seen in Mediterranean waters during the heyday of the Roman Empire, long before their recorded use among the Dutch, the Arabs and others. Did ancient sailors know the gaff-headed sail as well? So far there is no evidence; but I have high hopes of some day stumbling across some tombstone or sarcophagus which will supply this sole missing link in the story of the fore-and-aft sail in ancient times.

1 For example, Jean Poujade, *La route des Indes et ses navires* (Paris, 1946).

2 *Glossaire nautique* (Paris 1848), s.v. 'latena' (p. 915).

3 F. Moll, *Das Schiff in der bildenden Kunst* (Bonn, 1929), p. 21, convinced that the ancients knew only the square rig, attempts to explain away the sail pictured by arguing that a squaresail was intended but, because of the artist's clumsy perspective, it seems to resemble a lateen. It is unquestionably a lateen and since we now know that the ancients used another variety of the fore-and-aft rig, Moll's real reason for doubting it disappears.

Maritime Miscellany Series, No. 11

RIG IN NORTHERN EUROPE

By Sir Alan Moore, Bt.

This paper was intended to have fifty illustrations including two plates. Owing to the high cost the plates have been foregone and the drawings reduced to thirty-two. Through lapse of time the originals, in pencil, have become unsuitable for reproduction. This is fortunate because Commander C. H. Williams, R.N.R., a Master Mariner, square rig, and a much better draughtsman than the writer, has most kindly drawn them afresh in ink. Fig. 17 is entirely the illustrator's.

Old marine dictionaries and books on seamanship are tantalizingly vague in depicting and describing the smaller craft. Consequently a good deal of guessing has been necessary for leads of braces and the like.

ALTHOUGH climate has caused the rigs of the North to differ from those of the South, the two have influenced each other and cannot be considered entirely apart. We are not yet in a position to describe the changes and development in the rigs of Europe as a whole because we know only the main outlines of what happened in the Mediterranean in ancient times and during the Dark Ages. Here it will be enough to note that early Mediterranean sails were square as in the North, and that by the beginning of the Christian era a usual rig was a square mainsail with a small square sail forward on a mast which was almost a bowsprit; that in classical times triangular main topsails were set; and that at the beginning of the Dark Ages the lateen had appeared. The lateen partly replaced the square sail, but not entirely. We do not at present know when square sail and lateen were first united in one rig.

When we consider the innumerable rigs of the last few centuries and what the sailing ship could do in its prime, which was also its old age, development seems slow. Northern nations used sail effectively for only a little over four hundred years. They seem not to have advanced beyond one mast and one sail before 1400.

One reason may have been the prevalent use of the oar. Till well into the Middle Ages the seaman was primarily an oarsman. The early ships, which were men-of-war, transports, and emigrant ships as required, were small and well manned. They had power; and, as we all know, when power is available, sails do not thrive. There was, however, an incentive to use sails which is lacking to-day: rowers tire; engines do not. When a coasting trade developed and ships became heavier in proportion to their crews, sails must have been used more and more. Nevertheless, since the ships had to be small, because natural harbours and rivers are usually shallow; and since

in many places there were tides to help, or in the fjords mountains to keep off the winds, the incentive to develop sails was slight. When, however, extended trade produced larger ships, too heavy to row and voyaging beyond the help of tides, the sailing ship developed rapidly. In the evolution of the rig of the large ship, fairly definite stages can be recognized, with longer or shorter transitional periods between them.

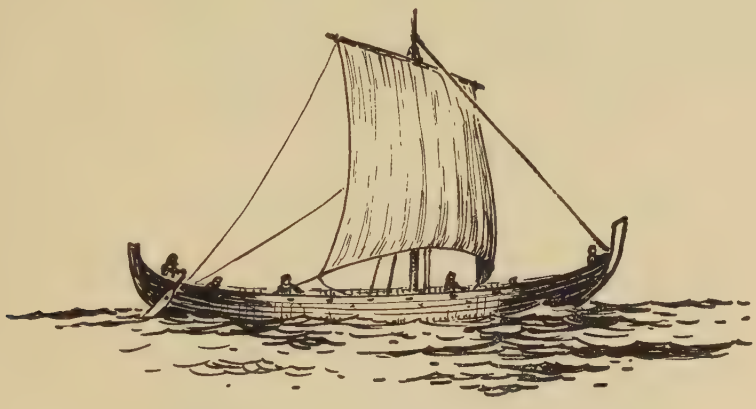

Fig. 1

First came the single light square sail habitually lowered when not in use (Fig. 1). This passed imperceptibly to the standing square sail with a yard often kept aloft (Fig. 2). Then came a relatively quick transition to the three-masted type of the sixteenth century with fore and main topsails, a spritsail on the bowsprit and lateen mizen. Then came rather suddenly the era of the spritsail topmast which covered the seventeenth and early eighteenth century. This gave place to the mid-eighteenth century type,[1] characterized by the jibboom and the half mizen or boomless gaff-mizen. This rig was changing before 1800 to one which remained essentially the same till the fifties in merchantmen, and till the end in purely sailing naval vessels. Its special points were the flying jib, mizen royal and spanker. Then came double topsails (Fig. 17) and wire rigging, and lastly, about 1880, the four-masted barque (Fig. 32) built of iron or steel.

After the first stage the large ships were accompanied by an ever-growing and ever-changing flotilla of smaller craft.

The evidence for the earliest times is scanty. It is mainly in the light of much later records that we believe the early sails to have been square. Even the sails of the Bayeux tapestry tell us little. Indeed, it would not be

1 See the beautiful model of H.M.S. *Tartar* at the National Maritime Museum.

unreasonable to interpret them as lateens or even as lugs; for some of the yards are not slung exactly by the middle.

Three ninth-century Runic Stone pictures of Gothland are the only contemporary representations of Norse ships under sail.[1] Only one is at all realistic, and its light serves to show the darkness of our general ignorance. Yet it is some evidence that an effort at windward work was made. The eight or nine sheets connected with the whole foot of the sail by interwoven and otherwise linked bridles, together with the three attachments to the mast, strongly suggest that they were fitted to make the sail stand flat on a wind. The Japanese are said to have used similar gear for the same purpose.

Fig. 2

The proportion of width to depth cannot be determined. Proportions were always changing and varied from place to place throughout the age of sail. The sail in the twelfth-century seal of La Rochelle[2] is almost a square but the irregular foot suggests that it may have been deepened by a bonnet. Harold Brindley pointed out that this sail shows recognizable reef-points.[3]

Mr Carr Laughton has worked out that the *Philippa* of Edward III had a sail of the proportions of 7 for hoist and 5 for width. The depth probably included at least two bonnets.

1 See *The Viking Ships: Their Ancestry and Evolution*, by A. W. Brøgger and Haakon Shetelig, 1953.

2 See *The Sailing Ship*, by Romola and R. C. Anderson, p. 81.

3 *M.M.*, Vol. II, p. 132 and plate.

Though no line can be drawn between the light square sail (Fig. 1) which the buss afterwards used and which the Humber keel used till well into the twentieth century, and the standing sail (Fig. 2), the distinction is worth making. And for this reason: while the sail was light and easy to play with, it was (so to speak) plastic, and might have developed into something quite different; but when it became a large square sail with a heavy yard, its destiny was fixed; it remained square.

As ships increased in size and became less dependent on oars, so the one sail, requiring as it did more gear, becomes recognizable as the ancestor of the modern ship's main course. A ship of no more than 100 tons, with only a main course, must at times have been tiresome to handle.

The largest ships of about 1400 were of the carrack type; beamy, with high freeboard and an overhanging forecastle higher than the poop. They had a stout bowsprit, to which the bowlines were led, and a flagstaff on poop and forecastle; three places, not to speak of the flagstaff in the top, where a boat's sail might have been set experimentally to assist the helm. We do not know for certain whether spritsail, foresail, mizen, or topsail came first; but the evidence on the whole supports the priority of the mizen. We have no certain record of a spritsail in Northern Europe before 1450, at the very earliest.[1]

Henry IV's carrack in 1412 had a 'little mast'[2] as well as her mainmast. Mr Carr Laughton has found in a document of 1419 record of a 'contre mast pro le mesan' in a two-master;[3] but there are indications that this 'mesan' was square; and if so, its position is uncertain and we are not much further. But the convincing bench-end ship of King's Lynn ascribed to 1415 has a lateen mizen and no foremast,[4] and it is likely that the Mataro carrack model of about 1450 described in *The Mariner's Mirror* (Vol. xv, pp. 213–21) was rigged in the same way.[5]

It is hard to believe that a ship, rigged like a seventeenth century ketch but without head sail (Fig. 3), would have sailed, but a possible explanation may be found in the high overhanging forecastle. Perhaps early fifteenth-century ships in bad weather ran under forecastle instead of under foresail. Also, the high forecastle must have made them sheer about at anchor, and one would think have tended to cause lee helm, so the mizen, if it came first, may have been mainly a balancing and a riding sail, comparable with the mizen carried by modern power-driven fishing craft.

1 See *M.M.*, Vol. XLI, p. 20, 'The Ship of the Renaissance'. Mr Morton Nance suggests 1480.

2 *M.M.*, Vol. VI, p. 168.

3 *M.M.*, Vol. XV, p. 78.

4 *M.M.*, Vol. X, p. 215; note by H. H. Brindley. Also *M.M.*, Vol. XLI, p. 13, 'The Ship of the Renaissance', by R. Morton Nance.

5 Mr J. W. Van Nouhuys stated somewhere that this was so, and that he had found a picture of 1468 of a similar ship with the same rig. The reference is lost.

Three sails were in use together by 1438. By that year we have a record of a 'foke sail' and a 'mesan', besides the mainsail, in two balingers.[1] We do not, however, know what the foke sail and the mesan were. The mesan had a mast, but none is recorded for the foke sail. The omission may not be significant. In that case it is tempting to think that the rig consisted of two square-rigged masts and a lateen mizen.

Mr L. G. Carr Laughton inclined to the opinion that the foke sail was a spritsail on a bowsprit and the mesan a fore-sail.[2]

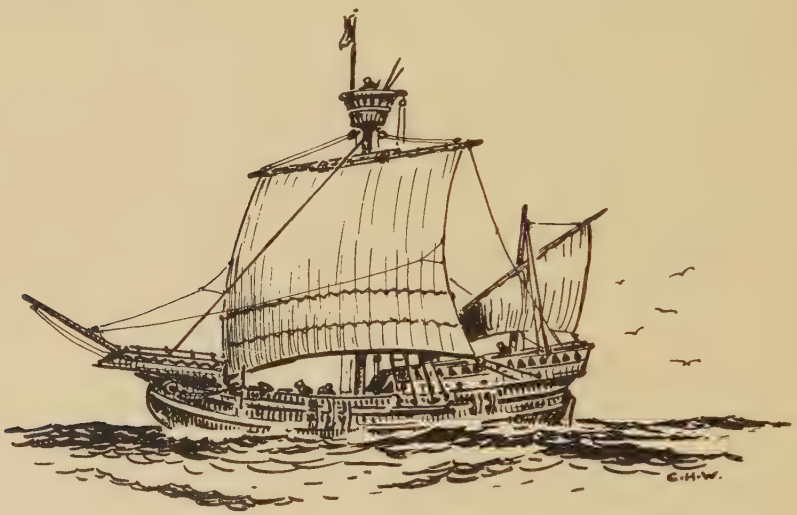

Fig. 3

If these balingers had not foremasts it follows that the mesan was a mizen, and since we know that the foke sail was set somewhere forward it must have been either a spritsail[3] or a staysail, probably the former, giving a rig like Fig. 4.[4] The hull is pure guesswork.

Dr R. C. Anderson pointed out that the possibility of a stay-sail as early as 1438 cannot be dismissed.[5] He quotes a German document of 1466 that seems to describe a vessel rigged with a sprit mainsail and staysail. Perhaps the balingers were rigged like the hoy in Fig. 11 without the jib, with stay-

1 P.R.O. Exchequer Accounts xi--xv, Henry VI, 53/5.

2 *M.M.*, 1929, Vol. xv, p. 78, 'Early Two-Masted Ships in England'.

3 For distinction the square sail on the bowsprit is spelt 'spritsail' (civadiere) and the sail on a sprit 'sprit-sail' (livarde).

4 Such a rig actually existed in the eighteenth century in the Black Sea. It is shown in one of the drawings added to an edition of Nicolas Witsen, author of *Scheepsbouw*, 1671. *MM.*, Vol. xv, opp. p. 197.

5 *M.M.*, 1929, Vol. xv, p. 196.

foresail, sprit mainsail and lateen mizen. The sprit-sail already existed, as we know from Van Eyck's picture of about 1416.[1]

Balingers were small craft, and may have had a rig of their own. We are probably safe in inferring that by 1450 some large ships were carrying, beside the mainsail, a very small foresail and a lateen mizen. Henceforward development was rapid. The ships in the Hastings MS.,[2] besides these sails, have a spritsail stowed in the head, a main topsail, and in one instance a fore topsail. The mizen is sheeted to an outlicker. The date of these pictures has been thought to be 1450; but the ships suggest thirty years later. Except for the fore topsail, we know from the ship inventories of Henry VII that all the above-mentioned sails were in use in 1485 and that large ships had

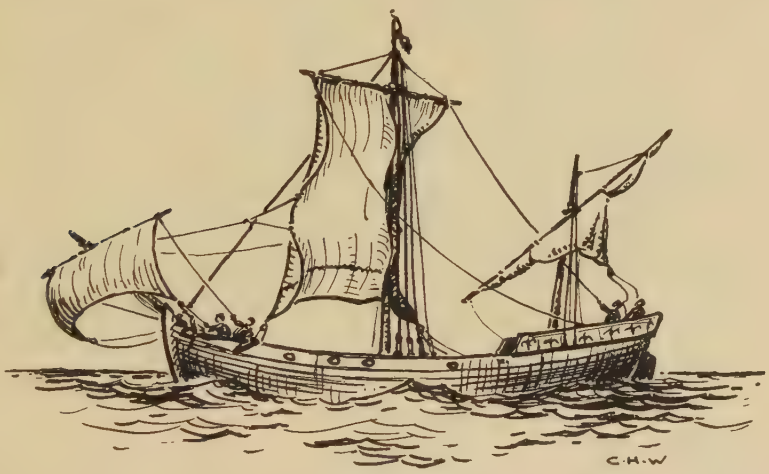

Fig. 4

already an after mizen or bonaventure (Fig. 5). The number of shrouds in 1485 indicates the relative importance of the masts. The mainmast of the *Martin Garsia* had thirteen shrouds a side; the foremast four, and the mizen six.[3] The foresail and spritsail already had a bonnet each, but not the mizen. The topsail may at first have been sheeted to the top. By 1495 it was a working sail with bowlines, and the sheets must have led somewhere on the lower yard.

1 H. H. Brindley, 'Some Notes on Mediaeval Ships'; *Camb. Antiq. Soc. Commun.* Vol. xxi, opp. p. 196.

2 *M.M.*, Vol. v, opp. p. 16. This MS., The Ordinances of Chivalry, formerly the property of Lord Hastings and illustrating the exploits of his collateral ancestor Sir John Astley, K.G. (1408–86), was fully described by Lord Dillon in a paper read to the Society of Antiquaries in December 1899, and published in *Archaeologia*, Vol. lvii. See plate VII of *The Sailing Ship* by Romola and R. C. Anderson, Harrap and Co., 1926.

3 *N.R.S.*, Vol. viii, *Accounts and Inventories of Henry VII*, p. 67, edited M. Oppenheim.

The auxiliary sails increased in size markedly between 1485 and 1495. The *Mary of the Tower* in 1485 and the *Sovereign* in 1495 had each 16 main shrouds a side. But whereas the (main) topmast of the *Mary* had 3 shrouds a side, the fore topmast of the *Sovereign* had 4 and her main topmast 6 shrouds a side. The *Regent* in 1495 had a topgallant mast and sail: the yard, if any, was perhaps not worth mentioning.

Fig. 5

Men became conscious of change and experimented. By 1515 five of the royal ships had main topgallant sails; most, perhaps all, with bowlines.[1] A lateen main mizen topsail was usual in the four-masters. We are sadly ignorant of the way these upper lateens were set. The *Henri Grace de Dieu* had a fore topgallant sail and main-mizen topgallant and bonaventure topsail yards. Yet, Mr Laughton has calculated that half her sail area was in her mainsail.

The chief change of the sixteenth century lay, not in multiplying sails, but in producing a well-balanced rig of two courses, two topsails, spritsail, and one or two mizens (Fig. 6). Even in 1515 the *Trinity Sovereign* had 10 fore shrouds a side to 16 main. By the end of the sixteenth century the area of the foresail was roughly two-thirds that of the mainsail, with topsails in about the same proportion; but there was considerable variety. Topsails increased in hoist, but topsail yards were seldom longer than one-third of their lower yards. The spritsail came to be nearly as big as the fore topsail

1 P.R.O. Miscellaneous Books. T. of R., Vol. 13, analysed by the present writer in the *United Service Magazine*, November 1909, and March 1910.

but on a longer yard. The mizen diminished; no doubt because ships were built higher aft. By the middle of the century it sometimes had a luff.[1] Top-gallant sails were little used and lateen mizen topsails still less. Studding sails of some sort were in use before the middle of the century.[2] Reefs were generally given up.

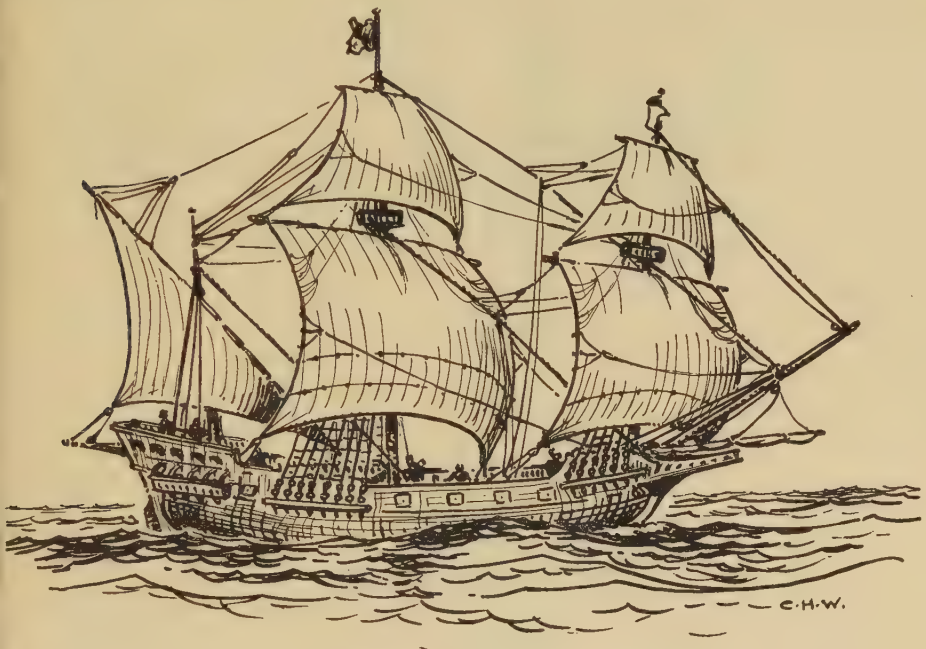

Fig. 6

Other Rigs, 1400 *to* 1600

We have seen that, about the time when ships began to use two masts, there is evidence of other rigs. Besides the sprit-sail it is probable that the lateen was used as a mainsail early in the fifteenth century. During the sixteenth century various combinations were tried. Thomas Petty's Map of Calais (1545) shows a vessel rigged with sprit-mainsail, stay-foresail and mizen mast.[3] This rig (with or without a lateen mizen) and with a spritsail on the bowsprit, is shown several times in Lucas Wagenaer's *Speculum Nauticum* (1586) in charts of the North Sea and Baltic. Some of his vessels

1 *M.M.*, Vol. II, p. 65 *et seq.* 'Guillaume de Testu and his Work'.

2 For example in 1545; see *N.R.S.*, Vol. XI, *The Naval Miscellany*, II, pp. 67–84, 'The Complaynt of Scotland'.

3 Frank G. G. Carr, *Sailing Barges*, p. 83.

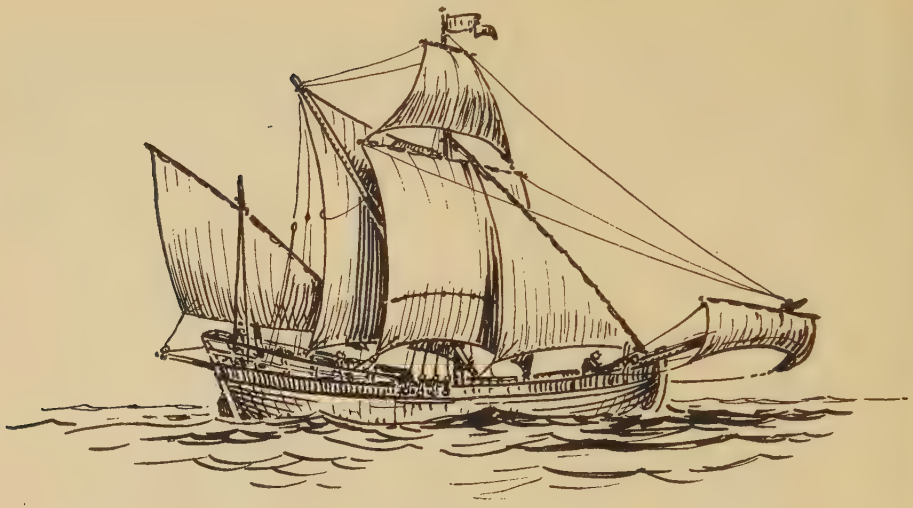

Fig. 7

Fig. 8

have a square-sail and topsail as well (Fig. 7). The lateen mizen is also shown in a craft with a buss mainsail and topsail and spritsail; presumably a ketch or dogger.

Both Le Testu[1] (1556) and Wagenaer show two-masters rigged like ships without mizens (Fig. 8). These forerunners of the snow, are to be dis-

1 *M.M.*, Vol. II, *loc. cit.*

tinguished from two-masted craft shown in the North Sea with buss sails;[1] sometimes also with a main topsail; and sometimes capable of carrying a fore topsail as well. Others have the foremast raking forward. Le Testu shows a boat with a rig something like this in Norwegian waters. She has a large square mainsail and a tiny square foresail set right forward.

Both Le Testu and Wagenaer show the Portuguese caravel with a square-rigged foremast (with or without a topsail) and, in addition, three masts bearing lateens (Fig. 9). Dr Edward Browne gives a rough sketch of one showing a spritsail.[2] With one exception, to be noted presently, in all these rigs the principal sails are square, sprit, or lateen, separately or in combination. Most of the craft with sprit-mainsails have a stay-foresail, and this sail is not found with any other mainsail.

Fig. 9

The exception is unique. In a chart, which includes Finland,[3] Wagenaer shows a two-master with a spritsail on the usual high steeved bowsprit and a lateen mizen. The mainsail is very like a lug.

The seventeenth and early eighteenth century

Early in the seventeenth century two new sails became usual, the spritsail topsail and the square mizen topsail. The spritsail topsail existed before 1600.[4] It was fairly common by 1620. It was officially adopted by the Royal Navy on the recommendation of the Commission of 1618. The

1 That is, light square sails deep for their width and lowered for furling.

2 Sloane MSS. 1831.A. 1661–2.

3 *Speculum Nauticum*: Altera Pars, 35, 'Orae Maritimae inter Wiburgum et Narvam &c.'

4 *M.M.*, Vol. XVII, opp. p. 188, 'Dutch East Indiamen in 1599 by Vroom': and note by R. Morton Nance. See also, *ibid.*, opp. p. 182. 'Copenhagen in 1611': note by P. Holck.

spritsail topmast, perched on the end of the bowsprit, was an astonishingly unseamanlike contrivance (Fig. 10).[1] Its adoption when the stay foresail was already well known in small craft is odd enough, and its survival after the introduction of the foretopmast staysail suggests a regard for square canvas that is almost numinous. Yet it endured far into the eighteenth century. Captain Kidd, the pirate, actually carried a spritsail-topgallant sail and a mizen topgallant sail in 1697.[2]

Fig. 10

The mizen topsail, on the other hand, was a consistent and sensible development. It followed the spritsail topsail and was recommended by the Commission of 1618. Mr Carr Laughton has shown how useful in the newly established line of battle was the power of checking a ship's way by backing her mizen topsail. With the mizen topsail came the crossjack yard of the same length as the spritsail yard. For a time a sail was set on it. It seems to have been used as a trysail as was the square mizen on a buss.

Some of the last of the four-masters, e.g. the *Prince Royal* and the *Bear*, had square bonaventure topsails. The bonaventure mast and the outlicker were, however, soon laid aside. The *Sovereign of the Seas* (1637), though she blossomed into royals and a mizen topgallant sail, was a three-master.

1 Fig. 10 is founded on a rough drawing by Thomas Browne of about 1661. Sloane MSS. 1831.A.

2 *Barlow's Journal*, Vol. II, p. 484; ed. by Basil Lubbock (Hurst and Blackett), 1934.

But the most important change of this period was the great increase in the size of the fore and main topsails relatively to the courses, which they exceeded by the middle of the century. The chief increase at first was in height; that is to say, the topmasts grew more quickly than their yards. Early in the seventeenth century Mainwaring states that the topsail yards were three-sevenths the length of their lower yards.[1] The proportion was not exactly observed. In English ships by the end of the century they were a little more than half as long as the lower yards.

Reefs in the topsails, a natural result of increased size, seem to have become usual between the First and Second Dutch Wars. Thomas Browne's rough sketch of a frigate of about 1661 shows eyelets for a reef in fore and main topsails. A picture of 1672 shows two reefs in the main topsails and one in the fore topsail of English men-of-war. A Portsmouth order of 1694[2] directs two reefs 'in *every* topsail', one reef in the courses of Fourth and Fifth Rates, and two reefs in the course of Sixth Rates, with one bonnet for each course if required. Bonnets for courses lasted at least until 1720.

Staysails seem to have come into general use about the same time as reefs in topsails. Dr Anderson records a main staysail in the *Rotterdam* in 1658.[3] Browne's frigate (1661) had fore, main and mizen staysails and fore and main topmast staysails. Battine in 1685 gives the same, except that he omits the fore staysail.[4] By that time they had probably become official.

Studding-sails gradually became regularized. An attempt seems to have been made to carry them on a wind, since Battine records the use of bowlines for all the studding-sails mentioned by him: viz. fore topmast, main topmast and main.

Rigs of small craft in the seventeenth and early eighteenth century

Small ships continued to use the sixteenth-century rig. Besides busses, where boats used light square sails. Throughout this period a favourite rig for Dutch fishermen consisted of two square sails, a small one right forward and a tall narrow one a little before amidships.

The lateen tended to die out as a principal sail; but survived in the Newcastle carvels at least during the first half of the seventeenth century.[5]

Small craft generally gave up the spritsail on the bowsprit and substituted the jib. There are indications of this before 1630 in very small

1 *N.R.S.*, Vol. LVI, The Life and Works of Sir Henry Mainwaring', p. 259.
2 Reference lost (Portsmouth order).
3 *M.M.*, Vol. XI, p. 427; note by R. C. Anderson. 4 B.M., Harl. MSS. 1283.
5 Sir Henry Manwayring's *Seaman's Dictionary* 1644, subject Carvells; and see Capt. John Smith's *Seaman's Grammar*, 1653, p. 39. More information on these carvels is badly needed. Smith's comparing their sails to a tailor's shears suggests that they were two-masted.

Fig. 11

Fig. 12

Dutch schooner-rigged craft.[1] Thomas Browne shows a sprit-rigged hoy (Fig. 11), a galliot with a long gaff, called a half-sprit (Fig. 12), and a square-rigged ketch, with her mainmast amidships and a deep topsail, al with jibs, and lateen mizens.[2]

1 'Capture of the Spanish Silver Fleet off Havannah, 1628', reproduced in 'Catalogue of Loa Exhibition of... Macpherson Collection', plate VIII. See also a reproduction of an earl seventeenth-century Dutch engraving reproduced in *Old Ship Prints* by Keble Chatterton opp. p. 64.

2 *Op. cit.* 1661. Browne's drawings are very rough. Figs. 15–17 are interpretations.

Three new forms of fore and aft mainsail became common, probably about the same time as the jib. These were the Bermuda sail (Fig. 13), the shoulder-of-mutton sail (Fig. 14), and the half-sprit or smack sail (Fig. 12).

Fig. 13

Fig. 14

The Bermuda sail may have been derived from the lateen by discarding the mast and stepping the lateen yard.[1] The shoulder-of-mutton sail was much the same except that it had a short headstick and usually a boom. The headstick is important because it grew into a gaff. These two sails (Figs. 13 and 14)—they are sometimes indistinguishable—begin to appear in Dutch pictures during the first half of the seventeenth century.[2] They were carried by small two-masters,[3] both with and without a bowsprit.[4] These craft are so like the schooner yacht, as we should call her, in Van de Velde's 'Fresh Gale'[5] that we are justified in supplying from it what happens not to be shown in the earlier pictures. The shoulder-of-mutton sail was also carried in vessels with one mast. A careful examination of Dutch pictures might determine whether the 'schooner' or sloop came first.

The half-sprit became a favourite sail for English hoys and yachts. It may have arisen by setting a sail on the after part of a sprit, the fore end of which had been allowed to go forward until the spar balanced. By the mid-

1 For a modern example of the same development actually in transition see *Les Caboteurs et Pêcheurs de la Côte de Tunisie*, by P. A. Henrique, plate XV, 'Loude, bateau des pêcheurs de Sfax'.

2 See Keble Chatterton, *Fore and Aft; the Story of the Fore and Aft Rig*, illustrations on pp. 76 and 78.

3 Both kinds appear in 'Flushing', 1661; Keble Chatterton, *Old Ship Prints*, p. 78.

4 E. P. Morris, *Fore and Aft Rig in America*, plate XXIV.

5 *M.M.*, Vol. 1, p. 28.

century it probably had jaws and was, in fact, a gaff. For a long time the sail hardly ever had a boom.[1]

The lug was known. Fortree[2] illustrates and names it. It seems to have been but little used.

Fig. 15

Fig. 16

In the latter part of the seventeenth century the brigantine rig becomes recognizable. The mainsail was sometimes a buss sail (Fig. 15).[3] Sometimes it was a lug. A picture by John Cleveley (d. 1752) in the Bruce Ingram collection shows a brigantine with a furled lug mainsail and square main topsail. Mr Prideaux Naish has quoted the log of a brigantine[4] which was evidently rigged in the same way in 1718. Lug and buss sail, however, in the early eighteenth century, gave way to a shoulder-of-mutton or short-gaff sail with or without a square topsail (Fig. 16).

It is unlikely that the prototypes were called brigantines. Somehow the word brigantine, which in the seventeenth century denoted a small galley rigged with fore and main lateens, became associated with a gaff-sail. 'Brigantin' became the French for the driver, hoisted to the mizen gaff, and for a gaff mainsail.

Mr Morton Nance has shown us 'An English flight with a gaff, rigged like a brigantine',[5] to translate Van der Meulen's description. The flight,

1 For a possible exception see a vessel in the background of 'Fresh Gale', *op. cit.*

2 Pepysian MSS. no. 1731, *c.* 1660. The Bermuda, shoulder-of-mutton, half-sprit, and other sails are also shown here.

3 *M.M.*, Vol. VII, p. 354 *et seq.*, 'H.M. Brigantine *Dispatch* 1692–1712', by L. G. Carr Laughton.

4 *M.M.*, Vol. VI, p. 40 *et. seq.* 'Extracts from the Log of a Salt-Trader, 1717–18', by F. C. Prideaux Naish.

5 *M.M.* (1919), Vol. V, p. 4, 'British ships through Dutch spectacles'.

or flute, characterized by her bluff bows and tumble-home, was usually rigged like a contemporary ship. Van der Meulen's late seventeenth-century 'Engelese Fluyt' has a spritsail topmast, a square rigged foremast, a mainmast square rigged with the addition of a boomless gaff sail, and a lateen mizen, but no mizen topsail. Her lower masts are longer in proportion to the topmasts than those of an orthodox ship. She has no topgallant masts.[1]

The first important change after the opening of the eighteenth century was the introduction of the jib, officially adopted in the Royal Navy in 1705. The jibboom at first had no standardized way of fitting. But the jib soon, although not immediately, drove out the spritsail topmast. Mr Carr Laughton informed me that an Admiralty order of 1727 discards it for all ships below three-deckers. It was seldom, if ever, seen after 1750. The spritsail topsail was set under the jibboom. The foretack bumkin came into use about the same time.

The next striking change was the setting of the mizen on the after part of the yard only. This practice seems to have begun in the seventeen-twenties. The French retained the whole mizen longer than the British.[2]

The gaff mizen was used by small ship-rigged vessels in the forties. A narrow driver on a short yard was hoisted on occasion to the peak. Its foot was spread by a boom athwart the poop. Some time after the middle of the century this sail gave place to a sail shaped like the mizen, only larger. The after part of its head was extended beyond the mizen yard or gaff by a light yard. It had a boom projecting far over the tafferel.

Early in the century topsail yards became longer. The French lengthened them before the English. The mizen top-gallant sail was slow in coming into use. The *Jason*,[3] a privateer built at Bayonne in 1747, had it, but ships were often without it until 1770.[4] No mast ever grew two permanent square sails ahead of another; and so until the mizen top-gallant sail was established, fore and main royals were seldom seen. Three royals were sometimes carried before 1780.[5]

Three reefs in fore and main topsails and two in the mizen topsail were

1 The descent of the brigantine from a three-masted rig is discussed by M. C. G. Hooft, *M.M.* (1922), Vol. VIII, p. 73; 'Brigantines and the Introduction of the Smack-Sail in Square-rigged Vessels'. See also Brigantines, by E. A. Singley, *M.M.* (1920), Vol. VI, p. 292 *et seq.*

2 At least until 1757; see Basil Lubbock, *Adventure by Sea*, plate XXIX.

3 Commander J. W. Damer Powell, R.N.R., *Bristol Privateers and Ships of War*, opp. p. 151.

4 In the picture in the Macpherson Collection of the capture of the Spanish *Hermione* by H.M. Frigate *Active* and sloop *Favourite* in 1762 the Spaniard has no mizen topgallant sail, but both the British ships have it.

5 *The Nelson Memorial, 1899*, by J. K. L. (Sir John Laughton) gives, p. 46, H.M.S. *Foudroyant*, 1778, as the first ship in the Royal Navy to carry three royal yards.

seen very early in the eighteenth century. The *Charles Galley* was so fitted in 1708.[1] In 1788 four reefs in the fore and main topsails and three in the mizen topsail were ordered in the Royal Navy.[2]

An outer or flying jib was used in the middle of the century especially by the French. It was hoisted to the topmast head.[3]

Staysails between the masts were fully developed in the middle of the eighteenth century. It is hard to discover when the upper staysails were first cut four-sided; but some had a luff before 1750.[4]

The nineteenth century

About 1790 the eighteenth-century rig began to change towards that which was carried by the purely sailing ships of the Royal Navy till the end. A few foreign training ships carried it till the beginning of the War of 1914.

The mizen mast had at last become a full partner and had a royal. Until after Trafalgar, royal yards were not usually crossed at anchor.

The flying jib was now hoisted to the topgallant masthead, and its tack was some distance beyond that of the jib. The flying jibboom was ordered in the Royal Navy in 1794.[5] In consequence, the dolphin-striker became usual and grew longer.

The mizen yard, by this time carried only by the largest ships, disappeared from the Navy between 1796 and 1799.[6] Some Indiamen carried it into the nineteenth century. The driver, bent to the gaff and its foot spread by the old driver boom, became the working sail.[7] The mizen, without a boom, was retained for use in hard weather.

The spritsail topsail went out of use and was discarded by the Navy in 1815.[8] The spritsail was set less and less often, and its yard tended to become merely a spreader for the jib and flying jib guys. Some merchantmen carried it above the bowsprit for this very purpose. Gradually it was replaced by gaffs. H.M.S. *Britannia* had them in 1830.

Main trysails were seen before 1800[9] and trysail masts were fitted in 1815;[10] but pictures of the twenties often omit the sail. In the middle of the

1 *United Service Magazine*, June 1909, *The Charles* had a jibboom.
2 *M.M.*, Vol. x, p. 190, 'Report to the *Victory* Technical Committee of a search among the Admiralty records', L. G. Carr Laughton.
3 J. W. Damer Powell, *op. cit.* p. 168, The *Southwell*, 1744.
4 J. W. Damer Powell, *op. cit.* opp. p. 154, The *Duke of Bedford*, 1745.
5 *M.M.*, Vol. x, p. 190, 'Report to the *Victory* Technical Committee.'
6 One British ship, the *Vanguard*, had it at the Nile, 1798.
7 *M.M.*, Vol. x, *Victory* Report.
8 *Ibid.* 9 *Ibid.* 10 *Ibid.*

century the main trysail was regular in men-of-war, and some had a fore trysail.

No more important changes were made in the rig of sailing men-of-war. That of most large merchantmen differed little from it till the sixties. By that time Captain Howe's double topsails, introduced in 1853, were becoming general, and soon iron wire was being used increasingly for standing rigging and lifts[1] (Fig. 17).

Fig. 17

As ships were built longer, the foremast was stepped farther aft. In consequence a shorter jibboom sufficed, and the flying jibboom was gradually discarded. The jib was divided about the same time as the topsails were. Double topgallant sails had been fitted in America as early as 1869,[2] but were not much used in Europe before 1880.

In the clippers of the 'fifties and 'sixties the ship rig grew in every direction: skysails were a standing fitment and were given studding sails; while above skysails were moonsails, and on occasion others. Forward on the royal stay was the jib o' jibs, and beneath the jibboom the Jimmy Green, a narrow sail with a yard forward and one clew taken to the dolphin striker. Abaft the spanker was the ringtail. It was like a studdingsail with a short yard at its head and was hoisted to the after end of the gaff. It was sheeted to a boom run out on the spanker boom.

1 From information supplied by Mr George Naish.
2 In the Toronto brigantine *Sea Gull*; F. W. Wallace, *Wooden Ships and Iron Men*, p. 155.

With iron came still longer ships. The bowsprit and jibboom became still shorter.[1] Upper yards were much squarer and some ships were rigged 'baldheaded', with double topgallantsails, but no royals. The spanker gradually dwindled to a trysail, sometimes without a gaff.[2] Studding sails fell into general disuse after 1870. In the present century the spanker set on the jiggermast of 4-masted barques was sometimes divided into upper and lower. One of the two or three 4-masters afloat in 1948 had this arrangement.

Fig. 18

From about 1880 the usual rig for new large ships became the 4-masted barque, with three square-rigged masts of equal, or nearly equal, height, and a shorter jigger-mast carrying a spanker, gaff topsail and staysails (Fig. 18). A few four-masters, e.g. the *Liverpool*, in 1889,[3] had yards on the jiggermast, and two or three five-masted barques were built.[4] The logical summit of development was reached in the German five-masted full-rigged ship *Preussen*. She was wrecked under the South Foreland early in the present century.

1 At the Science Museum, South Kensington, the model of the *Sudbourn*, built 1880, shows almost the last stage of the three-masted full-rigged ship. Near this model is one of the *Pass of Melfort*, a 4-masted barque of 1891.

2 Early in the present century an old sailor, talking to the writer, called such a sail a 'bonny-venter'; a truly remarkable survival of an old name.

3 R. J. Cornewall-Jones, *The British Merchant Service*, illustr. opp. p. 120. The *Liverpool* was wrecked in the Channel Islands.

4 One, *La France* of Dunkirk, at anchor in the Downs in 1897, was run into at night by H.M.S *Blenheim* and severely damaged, *ibid.* p. 370, with plate.

Some other rigs in the eighteenth and nineteenth centuries

The principal rigs of smaller vessels in general use in the eighteenth century were those of the snow, the brigantine, with the related bilander, the ketch, and her kindred the galliot, howker and dogger; single-masted vessels with gaff sails like the sloop and hoy, and in the second half of the century the schooner and the lugger. There must have been also many local rigs which are forgotten. The Bermuda sail, for instance, continued in use

Fig. 19

in Holland,[1] and although rarely found, survived for some time in England.[2] A picture of the Exe in 1745 by Samuel and Nathaniel Buck[3] shows a vessel with two Bermuda-rigged masts. It shows also small square-rigged two-masters with a course and topsail on each mast. Probably from some such craft the typical eighteenth-century snow developed. In the middle of the century the word 'snow' ordinarily implied two square-rigged masts with a boomless smack sail set on a trysail mast abaft the mainmast. The rig was popular (Fig. 19).

1 E. P. Morris, *The Fore and Aft Rig in America*, plate XX B shows a Dutch boat of 1780 with two Bermuda sails.

2 It is shown in Steel's *Elements and Practice of Rigging and Seamanship*, 1794, opp. p. 136, Vol. 1, where it has a high clew and is called a shoulder-of-mutton sail. Following p. 220, a Man-of-War's Pinnace is represented with two Bermuda-rigged masts, schooner fashion. In cut, the sails look oddly modern. The foresail is loose-fitted. The mainsail seems to have a boom but the engraving is too small for certainty.

3 Information by Captain F. C. Prideaux Naish, who kindly drew the craft for me.

Baugean's *Collections de toutes les espèces de bâtimens*, 1814, shows a Swedish snow drying her sails. Besides her main trysail and the rest, she has a lug set on her ensign staff and sheeted to an outrigger. The caption runs 'Ces bâtimens portent, à leur mât de pavillon, une voile aurique et grée comme celle que les lougres portent à l'arrière'. The author also tells that such vessels were formerly (autrefois) much used in the mercantile marine.

In 1746 the Bristol privateer *Fox*[1] took a snow, bound from Topsham on the Exe to Newfoundland, and also a bilander and a brigantine. The bilander is something of a mystery.[2] She was like a brig with the old ship's mizen, on a yard, for a mainsail (Fig. 20). The snow and brigantine were found more convenient and bilanders are seldom heard of after 1750, except in dictionaries.

Fig. 20

The brigantine, early in the eighteenth century,[3] sometimes carried a square main topsail above her shoulder-of-mutton or short-gaff mainsail, and this soon became customary. At first the main topsail was smaller than the fore topsail and seems to have borne no proportion to any sail on the foremast (Fig. 21). Gradually the mainmast became shorter and the main topsail larger till it resembled that of a snow.[4] A craft so rigged came to be

1 Commander J. W. Damer Powell, R.N.R., *op. cit.* p. 149.

2 There were also small single-masted fore and aft-rigged craft called bilanders, Blanckley, *Naval Exposition*, 1750, Aubin, *Dictionnaire de Marine*, 1736, and Aubin classes senaus (snows) with them.

3 For example, about 1709; E. P. Morris, *op. cit.* plate XXVIII A.

4 In Falconer's *Universal Dictionary of the Marine* (1769) the bilander's main topsail is smaller than the fore, but in Steel's *Rigging and Seamanship* (1794) it is larger. Little confidence can be put in the details of either figure.

called a 'brig', a word in use at least as early as 1720. It was merely an abbreviation for brigantine.

When, perhaps before 1800, the brig had sometimes a main course and the snow a boom to her main trysail, the snow's trysail-mast was the only distinction between the two. Not unnaturally the rigs blended (Fig. 22).

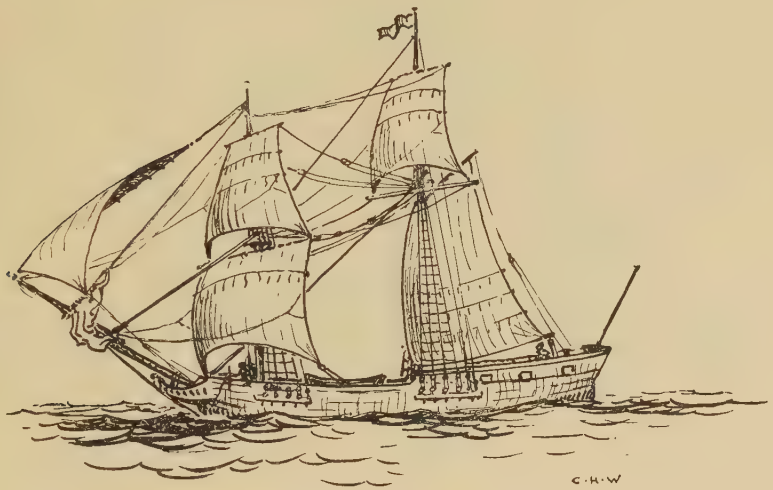

Fig. 21

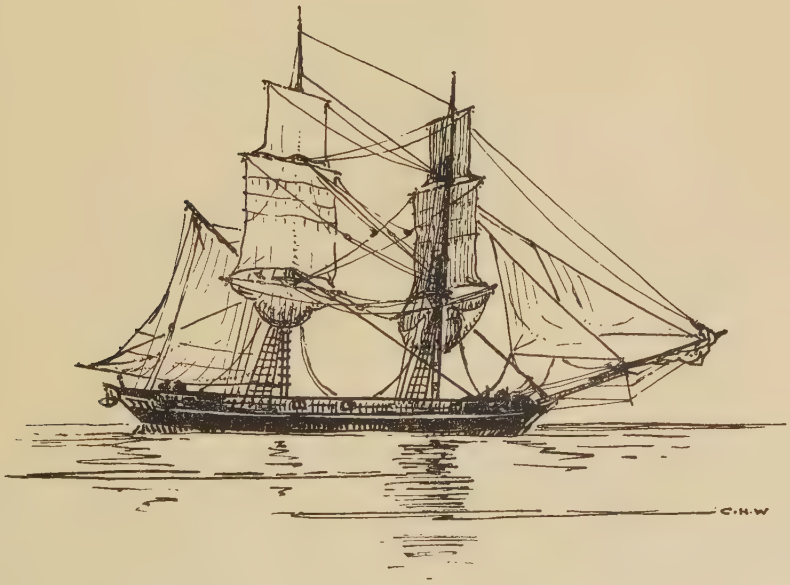

Fig. 22

The *Rose of Whitby*, which was afloat in 1905, had a main trysail mast and no main course. She was officially a brig, but her skipper agreed that she was properly a snow.

Fig. 23

Some brigantines did not acquire the fully square-rigged mainmast. But a mainmast wholly fore and aft rigged seems to have been so seldom seen that, when in the nineteenth century it became usual again, the craft which had it were called hermaphrodites or brig-schooners (Fig. 23), the name brigantine being for some time confined to those with small square sails at the main. Sometimes the main topsail of a brigantine was really a topgallant sail and the sail above it a royal, corresponding with the equivalent sails on the foremast (Fig. 24).[1] The small-main-topsail brigantine became rare after 1860, and the name brigantine was given to the hermaphrodite (Fig. 25).

The Ketch had a mizen topsail before 1700.[2] Except for her wingsail or main trysail, which was boomless with a short gaff, her rig was almost exactly that of a ship without a foremast (Fig. 26). Her jib stay, however, came to the lower masthead. In addition to the bomb ketches, several of the

1 For beautiful pictures of brigs, brigantines and brig schooners see Baugean *Collection de toutes les espèces de bâtimens*, 1814, and *Recueil de petites marines*, 1814. He sometimes calls the small-main-topsail brigantine a 'goellette-brick'. It looks as though history repeated itself and the brig-schooner took to square canvas at the main like the brigantine of a century before.

2 *N.R.S.*, Vol. v, 'Life of Captain Stephen Martin', plate opp. p. 37, 'The *Blast* bomb'.

Naval yachts of the mid-eighteenth century were ketch-rigged. The complete rig seems to have died out at the end of the century.[1]

The modern fore and aft rigged ketch (Fig. 27) probably descends from some other member of the group, in which a taller lower mast allowed the

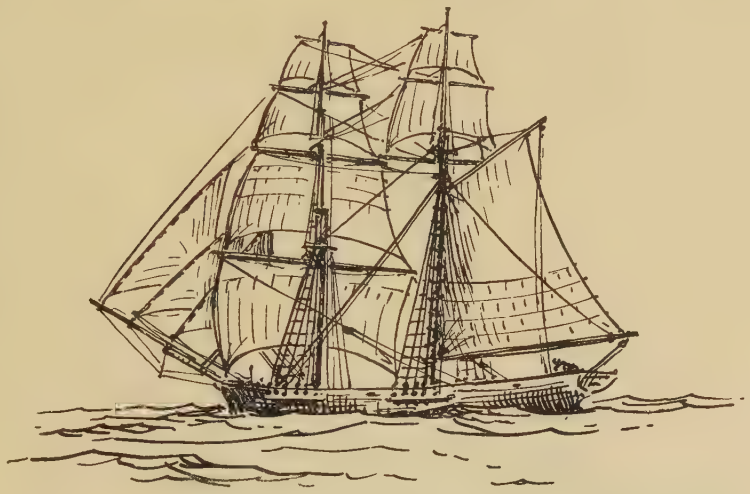

Fig. 24

Fig. 25

gaff-sail to oust the main course. A few ketches carried square main topsails to the end. The *Goldfinch* of Faversham had them in 1928. The ketch *Samson*, in which Benjamin Leigh Smith, the Arctic explorer, made voyages

1 There were seven bomb vessels in commission in 1815; some may have been ketches; Commander C. N. Robinson, *The British Fleet*, p. 245.

in the 'seventies, carried a square topsail and topgallant sail. There was a tendency to call her a schooner. This paper is dealing mainly with rigs, and only incidentally with the names given to them. These vary astonishingly and may lead astray. A naval pensioner who went to sea in 1882 told the

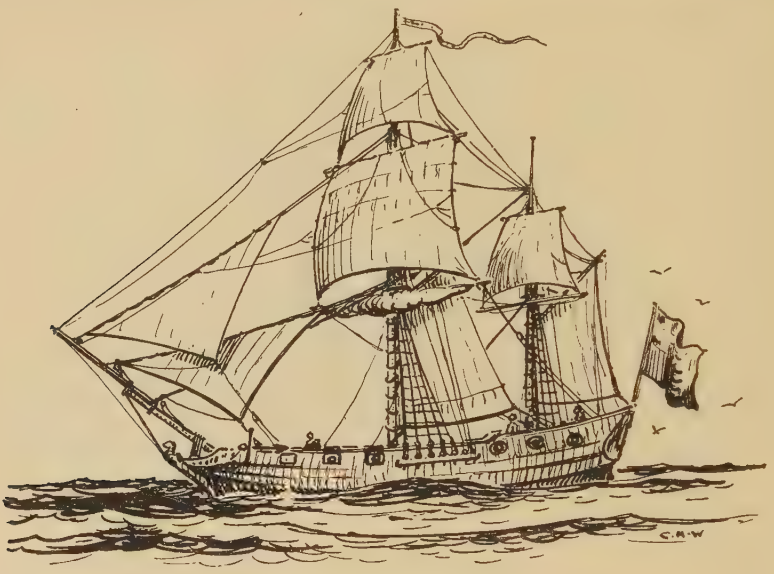

Fig. 26

Fig. 27

writer at Dell Quay, Chichester, in 1927, that he would call the rig just described a sloop, and said that he would so name her if she had three masts, both main and mizen being without topmasts.

In the same year Mr Suter of the Shipyard, Shoreham, said he would call a ketch with a square topsail a 'topsail yard sloop'. Another man said, also in 1927, that he would call such a craft a Jackass schooner. The man belonged to the motor 3-masted schooner, *Mary B. Mitchell* of Beaumaris.

It is impossible to decide from pictures when the headstick of the shoulder-of-mutton sail became a short gaff; but till the middle of the eighteenth century the short gaff and the long gaff (or half sprit) could be distinguished. Sloops commonly had the short gaff and hoys the long. Charles Brooking (1723–59) shows the modern sail with a moderately long gaff and a boom. The sails ceased to be regarded as different when the interval between them was bridged; but the Dutch retained the short gaff, and it was recognizable also in the Humber sloops well in the present century. The old smack sail was carried by a few barges and by the Thames bawleys to the end. The sail of the naval *de Horsey* rig and of the Norfolk wherry was essentially the same.

In the eighteenth century most fore and afters carried square topsails and this delayed the development of the gaff topsail, though it was sometimes seen in square riggers and fore and afters soon after 1750. It had no yard at first.

In the latter part of the nineteenth century sloops and the like were largely displaced by schooners, ketches and barges, but sloops were popular in Scandinavia till the end.

The schooner was developed chiefly in America, and after the usage of the time soon acquired square canvas. In 1765 the American schooner *Baltick* of 80 tons carried a square topsail and a square sail on the foreyard.[1] Falconer's marine dictionary of 1769[2], shows a fully developed two-topsail schooner; and so also does Steel's *Rigging and Seamanship* of 1794 (Fig. 28). The two-topsail schooner seems not to have outlasted the middle of the nineteenth century, but the ordinary topsail schooner remained to the end (Fig. 29).

Three-masted schooners, rare before 1850, were much used in the last years of sail. In Europe, except for those from the old Baltic provinces of Russia, they nearly always carried square topsails forward and the 4-masted topsail schooner was sometimes seen.

Though seldom, if ever, built in Europe, fore and aft schooners with four, five, six, and even seven masts, were built in America, and some of these many-masted schooners visited ports on this side of the Atlantic.

1 E. P. Morris, *The Fore and Aft Rig in America*, plate XXXB.

2 Most things in a marine dictionary can safely be taken as existing twenty years before its date of publication.

In 1923 a five-master was seen at Southampton. Her masts were those of a topsail schooner followed by those of a three-masted topsail schooner. She had a bowsprit but no jibboom.[1]

Fig. 28

Fig. 29

The chief puzzle of the eighteenth century is the appearance in its second half of the lugger fully developed (Fig. 30). The lug sail (as has been shown) was known long before, but seems to have been very little used. The MS. of Barlow's Journal[2] (1658–1703) shows rather vaguely a two-

1 Note by Mr F. C. Prideaux Naish of 20 December 1923. See also 'The Last of a Glorious Era', *The Syren & Shipping*.

2 Transcribed and edited by Basil Lubbock (Hirst & Blackett, 1934). Many of Barlow's drawings had to be omitted

masted craft with square-headed lugs like a Deal galley's sail at fore and main. In Brooking's picture 'Morning or Sun Rising' which appears to be not later than 1750, an open boat is shown with a lug foresail and sprit-mizen. In his 'Light Breeze' another two-masted boat has lugs for foresail and mainsail. She has a bowsprit. Nevertheless, Lescallier ignores the lug entirely in his *Vocabulaire de Marine* of 1777. His 'voiles auriques' (an exact translation of lugs) are the sprit-sail and gaff sails. He includes the word 'lug', but explains it differently.[1] However, in his *Traité du Greement* of 1791, he describes and illustrates a lug, mentioning that it is useful close-hauled, but that the necessity of dipping confines it to small vessels. Yet

Fig. 30

Steel, 1794, shows the three-masted lugger with fore and main topsails[2] (Fig. 30). In his preface to the Barham Papers,[3] Sir John Laughton quotes 'a larger lugger laden with oysters', in 1762. She was a Frenchman.

One the lugger was well known, the buss sail was quickly displaced. It was not much more than a displacement at first, because the essential change was not in the shape of the sail but in the method of going about. The influence of the buss sail is shown in the way in which the early luggers set their canvas, sometimes with the longer yard arm braced forward. According to Steel, they were fitted with braces. Steel does not classify the lugger among foreign vessels.

1 'Voile de fortune, ou tréou.'
2 The earliest example of the word in the *N.E.D.* is 1795.
3 *N.R.S.*, Vol. xxxii, Letters and Papers of Lord Barham.

The nineteenth century saw the heyday of the fishing lugger. In passing, the name was generally given only to lug-rigged craft with more than one mast. After 1850 English luggers began to give up the mainmast, but it was retained in a few French and Belgian vessels until the end.[1] To describe the different kinds of lug-rigged craft would require a paper as long as this. The rigs varied round our coasts and those of France and Belgium. The foresail was usually dipped in going about, but the mizen was a standing sail with its tack close to the mast. It was sheeted to a bumkin nearly always. Some luggers had jibs. Frenchmen especially carried lug topsails and most Englishmen mizen topsails. There were all manner of small differences. The Beer Head luggers had no jibs and kept the luff of the foresail taut with a wooden foregirt between the mast and the bolt rope. At the mizen sheet clew of the Fowey luggers the leech and foot did not meet at an angle but came to a little clew stick. No one gives a better idea of the diversity than Warington Smyth.[2]

Luggers were used less and less for cargo. R. C. Leslie describes a French lugger laden with potatoes in the 'eighties.[3]

The famous Deal luggers which carried anchors and anything needed to ships in the Downs declined with the decline of sail. The single-masted galleys and stouter galley punts with their almost square sail lasted well into the present century, and are still remembered as Deal sneaks amongst the fishermen of Hastings. To mention these few types is to underline the omission of many more.

The buss sail still lingered here and there; in Norway both for fishing and cargo carrying, till the motor came; and longer still in the Humber keels.

The barque-rig, so often seen in the nineteenth century, was scarcely a universal rig in the eighteenth century, but was almost peculiar to certain trades. The true barque, not the curtailed ship of recent years, had a mizen lower mast taller in proportion than that of a ship. The mizen cross-trees were sometimes higher than the main top.

The barquentine, or three-masted brigantine, with only the foremast square-rigged, was one of the commonest rigs at the end of the nineteenth century.[4] According to Admiral Smyth,[5] who wrote more than a hundred years ago, the rig began in the Great Lakes of America. The last British merchantman to carry a course and a top-gallant sail was the barquentine *Waterwitch*, built in 1871, and afloat in the thirties of the twentieth century.

1 Folkard, *The Sailing Boat*, 1853, p. 72, shows a Hastings lugger with three masts.
2 *Mast and Sail in Europe and Asia*, by Herbert Warington Smyth (Blackwood, 1929).
3 *A Sea-painter's log*, 1886, chap. III, 'At the town quay'.
4 Like Fig. 23, brigantine with a gaff-mizen added.
5 *Sailor's Word Book*, published 1867.

The sprit-sail after 1700 tended to become an open-boat's sail, except in Holland, where the koff (Fig. 31) provided the most noteworthy exception. Some Dutch fishermen used this sail to the end. In England the most notable vessel to carry it was the Thames barge (Fig. 32). All through the

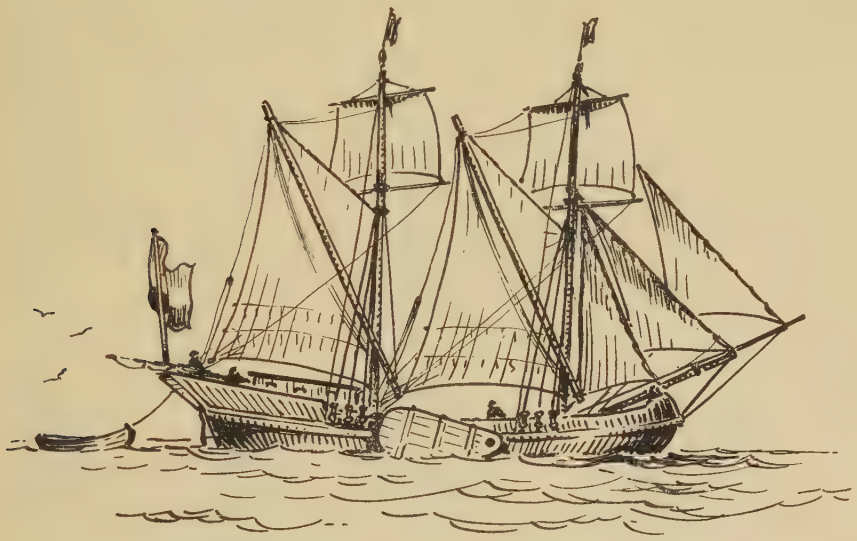

Fig. 31

nineteenth century she was developing, and in the last days, as the other sailing coasters died out, she took most of what remained of the trade which till lately occupied schooners and ketches. Her sprits were nearly always on the starboard side of the sail.[1] The Channel barges often had gaff mizens.[2] The sprit mizen was often stepped in the rudder head well into the twentieth century, especially in stumpies, that is, barges with no topmasts. The stumpy was particularly the rig of the swimheader, but some of these carried topsails. Topsail barges often carried a jib, and now and then a stumpy set one.

Yachting flourished in the nineteenth century as never before. Between 1815 and 1860 yachts were rigged as ships, brigs, brigantines, two-topsail and other schooners, and luggers; but later nearly every European sailing yacht was a fore and aft schooner, cutter or yawl, or more lately a ketch

1 In *Sailing Barges* (Hodder and Stoughton, 1931), Mr Frank G. G. Carr traces and copiously illustrates the development of the barge. Fig. 24, opp. p. 149, shows a swimheader by E. W. Cooke, R. A., of 1829, with her sprit to port. Fig. 59, following p. 258, shows a modern barge, the *Mermaid*, with the same peculiarity.

2 In November 1926 a hand of the barge *Leslie* of London called a gaff mizen a 'muley mizen'. The *Shamrock* of Faversham had one. The *Leslie* had changed hers for one with a sprit because its shorter mast was more easily hoisted out, with the topsail sheet.

(so called). For the smallest craft two modified forms of the standing lug were devised with booms. They are the balance lug of more or less traditional shape, and the high peaked gunter lug. This, except for the boom, is almost exactly the sail of the houari illustrated by Lescallier.

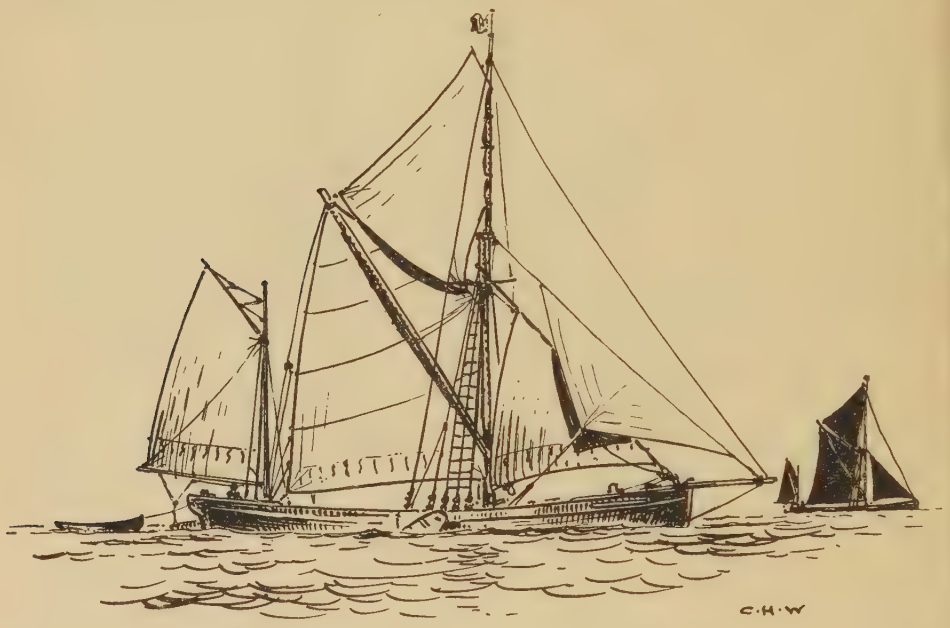

Fig. 32

Steel, 1749, Vol. II, p. 229, mentions that pinnaces 'sometimes have latteen sails, and rig with a sliding gunter like houarios'. His illustration, opp. p. 238, is not precise, but shows sails which are not lateens and appear very much like the modern gunter lug. Strictly, the sliding gunter yard had two travellers.[1] The gunter lug has one. The frontispiece of Folkard's *The Sailing Boat*, published in 1853, shows the two-masted rig with sails closely resembling the modern gunter lug except that the foresail has no boom.

The very lofty Bermuda sail, with a short boom now carried by hundreds of small yachts and racing dinghies, seems to descend from the gunter lug and from the Bermuda sail of the West Indies, but it has been profoundly modified by aeronautical experience. The result is a rig of mainsail and foresail as working sails that will lie nearer than anything known hitherto.

1 Smyth, *Sailor's Word Book*, 1867, has 'Sliding Gunters. Masts fitted for getting up and down with facility abaft the mast; generally used for *kites*, as royals, skysails and the like'. It seems possible that the name came from a slide rule or the like invented by Edmund Gunter, 1581–1626, mathematician and instrument maker.

It is said that the larger decked boats can sail at two points from the wind! And what seems strange, with the luff of the mainsail just on the shake and the head sail sheeted as flat as it can be got.

The boom is usually rectangular. A huge 'Genoa' jib is sometimes set and a spinnaker before all sheeted to the weather gunwale. The success of the rig is partly due to the use of hollow masts and, another debt to the aeroplane, of very fine strong wire standing rigging, and beautifully flexible wire halyards. Though the small racers bear the same sort of relation to working craft that an outrigger sculler or pair-oar bears to a Thames skiff, yachts that are far from mere toys use the rig and under it have crossed the Atlantic.

Sailing vessels, when they were part of the national economy, could exercise an indescribable fascination. Perhaps R. C. Leslie expressed it best. It was felt by landsmen who sailed, however humbly, and especially by those who remember the masts of London and sails along the horizon.

If you know the language, you find old sailors pleased to talk nostalgically of those days. They are inclined to be scornful of the modern pleasure flotillas, but in these the amateur finds a crumb of comfort.

EDITORIAL NOTE

SEA OFFICERS' LIST

A list of *The Commissioned Sea Officers of the Royal Navy, 1660–1815*, was projected by the late Mr David Bonner Smith, Admiralty Librarian and former Editor of the Mariner's Mirror. After his death the staffs of the Royal Naval College and the National Maritime Museum brought it sufficiently near completion to make it seem worth while to reduplicate it; and, thanks to the interest taken by Sir John Lang, the Admiralty has now reproduced a number of copies, and placed them at the disposal of the National Maritime Museum.

This edition is bound in three large volumes, and is being supplied to various institutions and libraries which are interested. A few copies will remain over, and can be lent to members of the Society for Nautical Research, on the understanding that the books remain the property of the Museum, and must be returned to it when no longer required. They must not be sold.

It is hoped that any user will keep a look-out for errors and omissions, of which there are inevitably many, and will forward them to the Director, The National Maritime Museum, Greenwich, S.E. 10. A master copy will be kept at the Museum, and in this all amendments will be entered. It is hoped from time to time to publish an erratum.

THE *DANAE* MUTINY

By J. D. Spinney

THE mutiny on board H.M.S. *Danae* in March 1800 has received very little attention from naval historians, and some of the references to it in the *Naval Chronicle* are misleading. This attempt to elucidate what happened, is based largely on the Court Martial minutes arising out of the affair, and on such of the ship's Logs and Muster Lists as have survived. But some of the story belongs to France, and I must record my obligation to the Conservateur of the Naval archives at Brest, Capitaine de Frégate Clavery, and to his colleague at Rochefort, Mme Descubes, for their assistance from the other side of the Channel. The *Danae* mutiny resembles the more famous *Hermione* affair of three years earlier, although happily without its brutality, and the story, in so far as I have been able to discover it, leaves some intriguing problems unanswered. The history of the ship is not without interest, and so I have introduced a brief account of it prior to the mutiny.

H.M.S. *Danae* began as the French corvette *la Vaillante*, and was built at Bayonne in 1796. She was flush-decked, pierced for eleven guns a side (although under the French flag she only carried twenty long 8-pounders), and with her graceful sheer and miniature quarter-galleries she must have been a very pretty little ship. According to her first captain, Pierre Laporte, whose enthusiastic comments may be seen in the Rochefort archives, she was exceptionally fast and handy, capable of twelve knots off the wind, and nine and a quarter close hauled. For a short while in 1797 she was commanded by the future Admiral Jurien de la Gravière, who describes his unhappy experiences in her in his *Souvenirs d'un Amiral*,[1] but before he could take his new command to sea the *coup d'état* of Fructidor took place. *La Vaillante* was chosen to transport its more illustrious victims to Cayenne, a captain more in sympathy with the new regime was needed, and so Laporte resumed the command. On 25 September 1797 she left the Ile d'Aix with the ex-Director Barthélemy on board, the Abbé Brottier, Barbé-Marbois, President of the Chamber of Deputies, and twelve others. She transported them safely and was back at Rochefort by the end of January 1798. The political purge was still going on and on 5 August she sailed again for Cayenne, this time with fifty-one prisoners on board, including twenty-five priests.

Two days out, and running free before the fresh easterly wind, a strange

1 De la Gravière consistently refers to her as *La Brillante*, but there seems little doubt that the passage of time caused his memory to play him false.

sail was sighted ahead. Laporte instantly hauled his wind and headed south, while the stranger, which happened to be Pellew's *Indefatigable*, made all sail in pursuit. All that day the wind blew fresh and true with both ships reaching south on the port tack. At ten Pellew reckoned the distance to be eighteen miles, the hands of the *Indefatigable* were kept busy wetting her sails, and by four that afternoon the lead had been much reduced. The *Indefatigable* continued to gain during the night, so that next morning the French corvette was only one and a half miles ahead. Laporte fired one broadside 'pour l'honneur du pavillon', and surrendered almost exactly twenty-four hours after being first sighted; and there followed the incident so pleasantly described by Dr Parkinson in his life of Exmouth, of the French priests blessing the prize-crew. So, in an atmosphere of benediction and gratitude, the prize directed her course for Plymouth.

It was decided that such a ship as *La Vaillante* would be an acceptable addition to the Royal Navy, and so for six months she lay refitting in Plymouth dockyard, whence she emerged early in 1799 as H.M.S. *Danae*. Re-armed, she now carried twenty 32-pounder carronades and two long sixes on the main deck, and in addition (if James is to be believed), she had twelve 12-pounder carronades on forecastle and quarterdeck.

James points to this conversion as 'a forcible illustration of the way the British usually equip French ships of war, particularly corvettes', the burden of his criticism being that we gave them 'more guns and fewer men than they were ever intended to carry'. The 12-pounder carronade was only a small piece, but even so it cannot have been easy to find room for so many of them, and as the *Danae* seems to have been a poor sailer after the Plymouth refit it may well be that James's strictures are justified. Besides all this, the dockyard replanned the officer's accommodation, and provided a larger galley and more elaborate store-rooms.[1] On 17 December she was commissioned by Captain Lord Proby, a promising young officer[2] in his early twenties, who possessed the important qualification of being the eldest son of the Earl of Carysfort, and on 2 March 1799 she sailed, very short-handed, to operate under the orders of the Commodore, Defensive Flotilla, Jersey.[3]

1 Plans of the ship 'as when taken' and 'as fitted', dated respectively November and December 1798, are at Greenwich.

2 This appears to have been Lord St Vincent's opinion (N.R.S. *Spencer Papers*, Vol. II, p. 78). Lord Proby's official correspondence at this period indicates that, although a zealous officer and an estimable young man, he was very inexperienced, and more good-natured than his position warranted.

3 The *Danae* was probably a crowded and uncomfortable ship. The letter of protest Lord Proby wrote when he learnt he might have to accommodate a distinguished passenger, is illuminating:

'*Danae*, Hamoaze, January 30th 1799.

. . . she is not suited to accommodate more than her own officers. So great a part of her provisions is now obliged to be kept in the tween decks for want of room in the hold, that no berth can be

During the next twelve months the *Danae*, her inexperienced young captain, and her insufficient complement, were to become intimately acquainted with every promontory and indentation of the rocky Brittany coast from St Malo to the Penmarcks. The story of her first cruise is one of fresh gales and close-reefed topsails—but there were compensations. On 4 April she was anchored in the Baie de St Brieuc when a French National lugger hove in sight from the eastward. The *Danae* weighed instantly, while the lugger fled back towards St Malo. It was rainy with a strong off-shore breeze, and the *Danae*, carrying much the heavier press of sail, came up fast. The lugger, ferociously but inappropriately named *le Sans Quartier*, hove her guns overboard, but the *Danae* was up with her by mid-day and she surrendered at once. Next day Lord Proby chased a privateer to within a cable of the St Malo fortifications, and then, on 26 April, he brought his ship back to Plymouth after a strenuous and testing fifty-six days.

But her spell in port was to be brief for her return coincided with Admiral Bruix's sortie from Brest. The news reached Plymouth on the 29th and the *Danae* sailed the same day. She was cruising off the Brittany coast for most of the summer, and still so short of complement that Lord Proby was glad to grasp at anything he could get to man her.[1] It is easy to be wise after the event, but when one reviews the series of startlingly bad bargains he made from 6 June onwards, it is not hard to find an explanation for the mutiny. On this date he took two men out of a privateer called the *Tartar*. Both were mutineers, and one of them, a Liverpool seaman aged twenty-four calling himself William Jackson, was to be the ringleader.[2]

After the mutiny was over, the late first-lieutenant of the *Danae* declared his belief that Jackson had served in the *Pompée*, where there had been an unsuccessful conspiracy two years before to seize the ship and carry her into Brest. As this is exactly what was to happen to the *Danae* the suggestion is interesting. It is certainly more credible than the sensational revelation made by the *Naval Chronicle* that he had been secretary to Richard Parker during the Nore mutiny, and that Lord Proby had pooh-poohed all warnings against taking him on board on the grounds that he was a good seaman and had behaved well since his acquittal.[3] A good seaman he probably was, for

made for General Maitland and his suite, without turning the people upon deck; as to his living in my cabin, there is hardly room if I give it up myself; and to convince their Lordships that I do not *make* difficulties, I have put on the opposite side the dimensions of it.' (These were: height 5 ft.; breadth (forward) 12 ft. and (aft) 8 ft. 6½ in.; length 9 ft. 10 in.)

1 '...so ill-manned I was glad to grasp at anything I could get.' Lord Proby writing from St Heliers on 26 May 1799.

2 It is uncertain whether Jackson was pressed out of the *Tartar*, or a volunteer; the Muster Lists in the P.R.O. say 'Vol', but the last one, which is in the Brest archives, says 'Prest'.

3 Vol. III, p. 295. This story is so good that I am most reluctant to reject it. But there is no reference to Jackson in the list of Nore mutineers (Adm. Sec. Minutes 137).

he was promoted captain of the maintop before the commission ended; and a rogue too, for he was scarcely a month on board before he received four dozen 'for different crimes'.

The *Danae* returned to Plymouth on 7 August 1799, and before she sailed again she had collected some more very doubtful characters. Fifteen of the men taken on board during this period in port were later mutineers, and six of them deserve special mention. John Williams, Samuel Scarborough, Daniel Gregg, James Brown, John Brown and Charles Goodrough (or Gaudran) were entered in the *Danae's* books on 13 October, and until two days before they had been serving on board the well-known French privateer *Le Bordelais*. This ship had been captured on the 11th by H.M.S. *Revolutionnaire*, whose captain had vowed he would see them hanged as renegades, and it is almost incredible that Lord Proby can have been so short of men as to have accepted them. However, all claimed to be American citizens and produced plausible stories that they had been serving in the Frenchman against their will, and that they desired nothing better than to serve the English. According to the *Danae's* first-lieutenant, one of the two Browns was heard to boast subsequently that he had been in the *Hermione* mutiny. The other Brown was a man of colour.

On 17 November, when the *Danae* sailed on her third cruise, she was still short of complement, for Lord Proby pressed twenty-three more men from various ships before the month was out, and two of these, John Marret out of a Jersey privateer, and Philip Lahey out of the Danzig packet, were later to join the mutineers. All through the winter months she was on her old station off Brest, and she celebrated Christmas Day by standing in towards the French port to aid one of her bigger sisters. That Christmas Eve the *Ethalion* (38) had been carried on to the Saints by an unexpected set of the tide, and next morning she looked a sad sight, bilged over on her starboard side, the gunwale and most of the stern submerged, and the rescue boats working with difficulty among the rocks and surf. The *Danae* anchored in 30 fathoms, and Lord Proby himself went alongside the wreck in a boat. But the *Ethalion's* position was hopeless. By eleven most of her ship's company had been taken on board the *Danae*. Then her master's mate cut away her lower masts; her first-lieutenant set fire to what remained above water; and nothing was left for the French when the *Danae* withdrew but charred wreckage and a plume of smoke.

In February 1800 she got as near to a real frigate action as she ever did under British colours, when she assisted in the pursuit of the French *la Pallas* (44). But, thanks perhaps to the alterations carried out by Plymouth dockyard, the once speedy *Danae* fell so far astern of her consorts that she was never close enough to fire a shot; and when at last she did arrive on the

scene, Lord Proby was by no means pleased to find himself required to accommodate thirty-seven French prisoners.[1] However, as she disconsolately hauled her wind for Jersey she fell in with a small French cutter, and took her. And before the end of the month another, but less desirable acquisition came her way, when the master of a transport carrying Russian troops to Jersey hailed her with the request that he might be relieved of an abusive and mutinous seaman, John MacDonald. Little realizing what was in store for him Lord Proby obliged, and made him a foretopman.

A few more days she had in Plymouth, and then, at the end of February 1800, with a cold wind blowing from the north-east, she sailed from the port for the last time. At once she found herself busy intercepting shipping and putting prize-crews on board, and soon she had about thirty of her best men absent on this duty.[2] It was while she was thus depleted that she recaptured on 10 March, an English vessel, the *Plenty*, trying to slip in to Brest under her nose. The English crew were released and the *Plenty* re-directed home, but, in an unlucky moment, Lord Proby took the five Frenchmen of her prize-crew on board the *Danae*. As far as one can gather, within three days some sort of liaison was formed between these prisoners and the disaffected elements in the *Danae's* crew. How greatly the Frenchmen contributed to the councils of the mutineers it is impossible to say,[3] but a decision was reached to seize the ship on the first opportunity, and carry her into a French port.

For their enterprise to succeed it would have to take place reasonable close to some port of refuge, as other ships of the blockading squadron were in the vicinity. Furthermore, to achieve secrecy and the essential element of surprise, they would have to wait until the last moment before broaching the subject to such as they thought would follow them. That the *Danae's* master-at-arms, who had been over a year in the ship, never had the least suspicion of any premeditated scheme,[4] speaks well for their planning.

1 He got rid of them two days later, explaining that: '. . . the *Danae* is so short of complement that these prisoners in case of meeting a ship of equal force, might be very troublesome, and they have already made the ship sickly. *Danae*, at sea, February 8th 1800.'

2 This is the number stated in the *Naval Chronicle* account; it is partly confirmed by the *Danae's* first-lieutenant, who said later that the captain had told him to put the 'idlers' and officers' servants into watches, as so many men were away on prizes.

3 When news of the mutiny first reached England, greatly exaggerated rumours of the part played by these Frenchmen were current, and reported in the press. They were subsequently denied by the late surgeon and purser of the *Danae*, in a letter to the *Naval Chronicle* (Vol. III, p. 294). None of the papers I have seen in the P.R.O. contain any reference to them, and only the slightest allusion to one of them is made by the French officer who took possession of the *Danae* at Conquêt. Troude, on the other hand, gives them all the credit for winning the crew over.

4 Evidence of William White at the *Danae* court martial, and perhaps he is speaking the truth. But the *Danae* had been unlucky in her masters-at-arms. White's predecessor, Bartholomew Quinn had been sentenced to three months imprisonment in the Marshalsea for prevarication. This was in

Events began to work in their favour on Thursday, 14 March, when the *Danae* was somewhere to the north of Ushant. A French convoy of eighteen sail was sighted, creeping along inshore, protected by an 18-gun brig. It was a hazy afternoon with a light breeze, and the *Danae* set her steering-sails as she ran in towards the land. But the convoy was safe enough, and had anchored beneath the guns of the fort of Le Conquêt in the Passage du Four, before the *Danae* could come within range. So, at 5.30 p.m. she shortened sail, wore round, and stood out to sea.

During this run inshore the ringleaders must have decided that conditions were not likely to be so good again, and that it was time to organize their following. At about three that afternoon some of the men from *Le Bordelais* were active in the fore-top and the main-top; a Bible was produced and an oath administered; there was to be no murder, but the ship was to be seized that very night. Lord Proby's servant, who revealed these details afterwards, said that the gunner from *Le Bordelais*, John Williams, managed this part, but probably Jackson, captain of the maintop, and another prominent mutineer, George Gardner, who was captain of the mizen-top, were also well to the fore.

Their plan was very simple: to capture the deck, and clap all opposition below hatches. It will be remembered that the *Danae* was flush-decked. Once masters of the hatches, companions, and sky-lights, the mutineers would be masters of the whole ship long enough for their purpose. That afternoon and evening it may be presumed that over forty men committed themselves to the enterprise, without a breath of suspicion reaching the officers. So night fell over the calm sea as the *Danae* stood out from the land.

Mr John Huntingdon, the master, had the first watch. He seems to have been a rather vague and not very alert officer. With all the 'idlers' and officers' servants standing their watches, and so many men away in prizes, Mr Huntingdon, who had no watch-bill, was very uncertain whom he ought to have had on deck with him, let alone whom he actually did have. The midshipman of the watch, described as 'a little boy' played no part in affair, but fortunately for the evidence later on, there was another midshipman on deck at the time, called Heron. It was a beautiful night, but very dark. Under her topsails and top-gallantsails the ship barely carried steerage way. At nine o'clock the master at arms reported 'All well'. Down below the other officers had begun to turn in.

September 1799, following the court martial of the *Danae*'s carpenter for frequent drunkenness, disrespect, and neglect of duty. The carpenter was broke, and the whole story suggests that Lord Proby was unlucky in some of his subordinates, and that there might have been something of a tradition of indiscipline in the ship.

Between 9.15 and 9.30, as the unsuspecting Mr Huntingdon was pacing the starboard side of the quarter-deck, five shapes materialized out of the darkness, and thrust him forward towards the gangway. Realization seems to have come to him slowly. His first ejaculations were: 'What! What is the matter? What does all this mean?' Then as awareness dawned on him and they began to handle him roughly he tried to break back towards the after hatchway, yelling at the top of his voice: 'Help! Help!' George Gardner, captain of the mizentop hit him over the head with a cutlass, and he collapsed on the deck.

Mr Midshipman Heron had been a little way behind the master, on the same side of the quarter-deck, between the bulwarks and the gun-room skylight. Despite the darkness he had recognized Jackson and MacDonald among Mr Huntingdon's assailants, and he started forward to his assistance. At once he found himself surrounded by fourteen or fifteen mutineers who brandished their cutlasses over his head and propelled him towards the main-hatch, crying: 'Down with you! Down with you! or we'll knock your damned head off.' Two fleeting impressions Heron received before he dropped below; one of Lord Proby emerging hatless from the after-companion, and being instantly struck down; and the other, of an exultant shout: 'The ship is ours, now, and we are masters.' Meanwhile, Mr Huntingdon, half-conscious on the deck, was also aware of some commotion further aft. Somehow he tumbled, or was dropped, down the main hatch, and made his way aft to the cabin.

Meanwhile, the alarm had been given below. Lieutenant Stephens of the Marines had not yet turned in, and heard the disturbance on deck. Guessing the truth he ran to warn Lord Proby and the other officers. Lord Proby too was still up, and without a moment's delay he raced up the companion ladder, already guarded by nearly twenty men. Within one step of the top Brown, the negro from *le Bordelais*, struck him over his bare head with a cutlass. (This was of course what Heron glimpsed before he was bundled down the other hatch further forward.) Lord Proby, stunned and bleeding collapsed down the ladder, just as the first-lieutenant, Charles James Niven, in his shirt and armed with a dirk, was rushing to his assistance.

At the same time the corporal of Marines was hurriedly rousing his detachment. Private Laurence Dowling was roused up with the alarming words: 'For God's sake turn out if you have a mind to save your life.' Dowling was quick-witted and resolute. He ran aft, disregarding the main-hatch which was probably battened down by this time, and tried to get up the after-hatch. The mutineers were having some trouble of their own here. They had thrown down the ladder, but either they couldn't find the last grating or they couldn't make it fit; the negro Brown was bawling lustily for

Edwards, one of the carpenter's crew. Then the head of Dowling appeared, asking (somewhat superfluously): 'What is the matter?' The question was answered by William Moorland, the gun-room cook, who aimed a blow at him crying: 'You had better go about your business; you shall know presently.' The marine dropped back and the grating went down. The mutineers had won.

Only two minutes had elapsed from the first assault on Mr Huntingdon. By the time the *Danae's* second-lieutenant, the Hon. James Rollo, had turned out, found his pistols, and given one of them to the surgeon, all below were prisoners. Heron, arriving in the cabin a moment later, saw both Lord Proby and the master bleeding from their wounds, Lieutenant Niven in his shirt with a drawn dirk, and the other officers in an irresolute and agitated group, asking each other what arms were below, and what ought to be done. Then five sheepish members of the master's watch made their appearance, with various unconvincing excuses for their inconspicuous behaviour. There was no time to attend to them then, but later on they had some awkward questions to answer.

Below, with the officers, were about forty loyal men, some still asleep in their hammocks. These were roused at once, and a search begun for arms, in which some of the skulkers from the Master's watch were ostentatiously active. But the mutineers had been before them; the arms chest was on deck, the arms from the store chest had been taken up too, and all that could be found below were four muskets, ten cutlasses, and some pocket pistols. All hope of forcing up the gratings was abandoned when the mutineers placed some of the boats upon them, loaded with shot. So, for the moment there seemed no prospect of recapturing the deck, and as though to emphasize their insolent triumph, and discourage any attempt from below, one of the mutineers fired a pistol down through the fore-hatch. But Lord Proby was not without hope; if only the mutineers were forced to keep the seas he could prevent their getting any water, and by this means oblige them to fight on fair terms.[1]

It is impossible to say what the mutineers did with the *Danae* during the night; probably they lay to, somewhere north of Ushant. As the long hours passed, Lord Proby attempted to parley. He offered, if the mutineers would give the ship up, to go immediately to Plymouth and transmit to the Admiralty any complaints they might have to make of the officers' conduct. Lieutenant Niven was sent to shout this up through the grating, and then Mr Hendry the surgeon. But to all such blandishments the mutineers, not unnaturally, turned a deaf ear. Nevertheless, Lord Proby persisted, and.

1 Letter from Lord Proby, read at the court martial of John Marret.

doubting his own influence, or that of his first-lieutenant, he now sent the *Danae*'s chaplain, the Rev. Mr Alsop. Twice he came to exhort the men, through the grating, to return to their duty, but he was answered with insults by either Jackson or MacDonald, so no more attempts were made. At intervals throughout the night the voice of Williams could be heard cheering, and calling for a good lookout forward. So the hours passed.

Dawn came at last, and Lieutenant Niven peered up through the after-grating. His view was limited, for the mizen staysail and a number of capstan bars were lying on it, but he could see John Marret the Jersey privateersman, armed with a cutlass and pistols, evidently on guard. Further round he could see MacDonald, similarly armed, sitting on the larboard hammock nettings, and apparently issuing orders. A little later noises forward suggested that the fore-topsail was being hoisted. The *Danae* was getting under way.

In the cabin, charts and compass were hastily produced. From the course taken, the officers reckoned that they must be heading back towards the Passage du Four, and that probably Brest would be their destination. Lord Proby was all for firing up through the main hatch and chocking the rudder, but on second thoughts it was decided to postpone this action until through the Passage and out in the main approach to Brest, where they might encounter some of our own cruisers. In the meanwhile, he desired Niven to go forward and knock out a bow scuttle on the larboard side, to try and ascertain exactly where they were. Niven did so, and realized at once that they had already entered the Passage; indeed he recognized the coast as being near the village and fort of Le Conquêt. The *Danae* was approaching the convoy she had chased the previous afternoon, but there was very little wind, and she was hardly moving.

Returning to the cabin to report, Niven found the attention of its occupants taken up with a new development; the *Danae*'s jolly-boat was being lowered from the stern, past the cabin windows.[1] Apparently the end was to come sooner than expected, so Lord Bridport's private signals, in their weighted chest, were consigned to the deep, after which there was nothing to do but wait.

Jackson, with four others including one of the Frenchmen, was off in the jolly-boat to explain matters to the no doubt puzzled and suspicious escort of the convoy, the French National corvette *la Colombe*. According to her commanding officer, Capitaine de Frégate Julien, who wrote his report the

1 It might be asked at this point whether any sort of attack might have been made on the mutineers through the cabin windows. They were all too small. Two were 18 in long by 12 in high, and the two others slightly smaller.

same day,[1] the *Danae*'s jolly-boat came alongside about midday, flying French colours above English colours reversed. The mutineers explained that they had already embarked two pilots to take the *Danae* into Brest, but that the calm and the ebb had made it impossible for them to get round Pointe de St Mathieu. Now, they were hungry, having eaten nothing since the previous evening, and apprehensive of an attack from below.[2] So they came to ask for assistance from *la Colombe*—and food.

Keeping the five men as hostages, the captain of *la Colombe* sent one of his lieutenants to verify their story, and, this done, the *Danae* was allowed to come in right under the guns of le Conquêt, so close indeed that one of the ringleaders, Williams, was able to hail them in French, desiring them to send troops aboard; the watchers through the grating could see him with his hands cupped to his mouth, as he shouted across the water. Then they heard boats approaching, and the mutineer Moorland welcoming them with: 'Vive la République française'. MacDonald could also be seen throwing ropes as they came alongside. Finally, at about two in the afternoon the prisoners heard more boats and then the tramping of feet as French troops arrived to take possession.[3]

On being summoned by the French officer to surrender, Lord Proby had no alternative but to comply. A little later, when the wind got up, *la Colombe* shifted her berth to anchor close to the *Danae*, and Lord Proby went aboard to surrender his sword to Julien. He did so with the words: 'Je me rends aux forces de la marine française et non aux rebelles de mon bord. J'eus péri, ainsi que mon Etat-Major, plutôt que de me rendre à eux.'

The officers and loyal men were put ashore at le Conquêt between three and four that afternoon. As Lord Proby went over the side MacDonald poured out a flood of abuse in a curious brand of French—perhaps to impress his new Republican friends. 'Noblie de Diable! Noblie de Merdo!' he cried, pointing at his late captain; and then, finding the strain of the French language too much for him, he went on to shout that Lord Proby had given six dozen for the Royal Bowlines, and that it was him that cut them.

The mutineers were allowed to remain on board the *Danae*, but the French put thirty men from *la Colombe* on board as well, and she was

1 Report of le vingt-quatre Ventose, an VIII (15 March 1800) from *la Colombe*, Brest archives.

2 'N'étant pas de force à resister longtemps à ceux qui étaient en bas.' *Ibid.*

3 A junior officer from *la Colombe* (le citoyen Verchin, Enseigne de vaisseau et Gueritault aspirant de Ière classe), commanded the troops. His commanding officer reported: 'Quand il arriva à bord, il trouva les Anglais prêts à redevenir les maîtres de la frégate.'

commanded by French officers, when she went on to Brest with the convoy a few days later.[1]

As for the *Danae*'s officers and the loyal men, we are assured by the *Naval Chronicle* that Admiral Bruix received Lord Proby with the greatest politeness, and all the French officers expressed the utmost detestation at the action of the mutineers. This may be true, but such chivalrous sentiments did not prevent our enemies from frankly acknowledging that they hoped to gain possession of our whole fleet the same way.[2] As prisoners of war they were of course strictly confined, but they had a small yard for exercise. For the first twenty-four hours the mutineers were confined in an outer enclosure of the same prison, and there were some unpleasant encounters. Gardner was seen wearing Mr Huntingdon's coat, and heard to express the wish that he had had not one cut at him, but three or four; MacDonald was his usual abusive self, accusing Lieutenant Niven of keeping some of his back pay that had been due to him from the transport; and another mutineer, William Cootes, made use of such foul terms that the officers demanded protection from the French authorities, or they would take the law into their own hands.

However, this nuisance only lasted so long as the mutineers had access to the yard where the others exercised. It is satisfactory to record that their reception by the French was a great disappointment to them. The authorities refused to enter them on board the French fleet arguing that those who could betray their own country were not likely to serve them well. Lord Proby, who affirmed this at his court martial, added his belief that from the time they were turned out of prison with six louis and a passport to go where they pleased, they could not find a house whose inhabitants would receive them; and this he supposed, from knowing that they were frequently compelled to apply to the government for shelter.[3] Soon some of the less prominent among them began to throw out hints that they had not been actively concerned in the mutiny, but had been asleep, or overpowered by the others. To any approach along these lines Lord Proby showed an uncompromising front.

Three of the ringleaders received special consideration. Explicit orders arrived from Paris, in the name of the First Consul, for Jackson, Williams

1 The *Naval Chronicle* (Vol. III, p. 295), gives the date as the 17th, and describes how H.M.S. *Anson* (a misprint probably for *Triton*), and *Boadicea*, chased her for a while. An entry in the captain's log of the *Boadicea* for the 17th would appear partially to confirm this: 'Saw a convoy under St Mathieu standing in for Brest.'

2 Stated by Lord Proby at his court martial.

3 Of the 41 mutineers whose names are recorded at Brest, only five admitted themselves to be English. Twenty claimed to be Irish, and twelve American. Checking these names against a *Danae* muster list one finds that at least twelve of the alleged Irish and four of the alleged Americans were born in England.

and a certain Ignatius Feeny[1] to be sent to the capital with the five Frenchmen taken out of the *Plenty*. Jackson and Williams have already been noticed. Feeny was a versatile but troublesome character believed to have been 'an Irish priest and a lieutenant in the rebel army'.[2] Perhaps the summons was simply for interrogation. But each was a man with a past.

A curious incident accompanied the departure of Williams for Paris. Before he left, he came to the gate of the prisoner's yard looking for Thomas Olding, the late armourer of the *Danae*, with a petticoat of Olding's wife. Whatever the reason for his having this garment (and one fears it may not be wholly to the credit of Mrs Olding), he returned it, said he was sorry for all that had happened, and that he wished Olding well. Then he limped off (his foot had been hurt a few days before under one of the *Danae*'s six pounders), but we have not seen the last of him.

The system of exchange was working smoothly, and only twelve days after the mutiny the first party from the *Danae* sailed from Morlaix for Plymouth.[3] On their arrival they were vexed to discover that a French version of the affair, crediting the five Frenchmen from the *Plenty* with the instigation and direction of the mutiny, had been widely publicized and generally accepted. Public denial of this, sometimes with considerable acerbity, gave relief to the ruffled feelings of some of the *Danae*'s officers while waiting for the rest of their shipmates and the impending court martial.

The other prisoners were marched from Brest to the prison at Valenciennes. As they left the seaport they were disgusted by a final encounter with four of the mutineers, including the inevitable MacDonald, all flaunting Republican cockades in their hats. But at Valenciennes they did not stay long, and by the beginning of June the last of them were embarking from Dunkirk. Here on the quayside, their number was reduced by one. Flemming, the man at the wheel when the mutiny started, had done nothing to help his officers, and had stayed on deck during the night with the mutineers. Later he had rejoined the loyal men and had been with them right up to the moment of embarkation. Then his courage failed him: he slipped away and was not seen again.

The Court sat on board H.M.S. *Gladiator* at Portsmouth on 17 June 1800. Lord Proby took such exception to the conduct of the six men of the

1 Against the names of these three in the Brest list is the note: 'Passé à Paris'. Two of the communications between Najac, Commissioner of the Navy at Brest and the Minister at Paris, are in the *Naval Chronicle*, Vol. III, p. 323. This correspondence further indicates that Gendarmes accompanied the men to Paris to take them to the First Consul.

2 Stated by Lieutenant Niven at the MacDonald court martial.

3 *Naval Chronicle*, Vol. III, p. 326.

Master's watch that they were taken into custody. When Mr Huntingdon was asked if he had not called out for help, he replied with feeling: 'I believe they might have heard me all over the ship.' Most of these men had been officers' servants, and Mr Huntingdon was so vague in his evidence that the Court did not think it worth while pursuing them. In the end Lord Proby, his officers, and such of his ship's company as were present, were honourably acquitted, the Court giving its opinion that they had 'made every exertion in their power to quell the mutiny and preserve His Majesty's ship'.[1]

Jackson cannot have stayed long in Paris, for on 28 March he embarked at Bordeaux on board the privateer *le Brave* as a topman.[2] After this he disappears from the scene, but not all the mutineers won that obscurity which alone could give them safety. Others besides Jackson elected to serve in privateers, and so active was the naval war among the light craft that the first of them had fallen into our hands before Lord Proby faced his court martial at Portsmouth. Once again the *Indefatigable* appears on the scene, for she it was that captured, on 12 June 1800, the brig privateer *le Vengeur*, two days out from Bordeaux for the coast of Brazil. No one recognized, among the hundred prisoners landed from her, John Marret, who had stood guard over the *Danae*'s after-hatch, for, being a Jersey man he spoke fluent French. For some months he escaped detection among the four hundred Frenchmen in the Mill Prison. Then, on the morning of Sunday 24 August, an identity parade was held, all the prisoners were mustered, and the wretched man was horrified to see his late first-lieutenant coming down the ranks. Niven had been searching the prison-hulks without success, but he recognized Marret at once. On 2 September he was tried, and a week later hanged on the frigate *Pique* in Plymouth.

Marret was the first. The next was MacDonald. In December 1800 this man had shipped on board an American schooner called the *Bilboa* at San Sebastian, but unfortunately for him, in May 1801, she visited the port of London. For a fortnight she lay alongside the tender opposite the Tower, and the ex-mutineer lay low. But at last the attractions of the shore proved too much for him. With an American protection, and disguised as an American seaman even to his ear-rings,[3] he was walking down a street in Wapping on 3 June when, by a remarkable coincidence (if it was a coinci-

1 Lord Proby soon received another command—the *Amelia* (38)—and was busily employed after the Peace of Amiens repatriating Irish seamen and Dutch soldiers. In May 1804 the *Amelia* sailed from Portsmouth with the West Indies Convoy, and within six months her captain, with nearly a third of her ship's company, were dead of yellow fever at Barbados.

2 This ship fell in with H.M.S. *Anson* a month after Jackson joined her, and was very nearly captured: Jackson, and possibly some of his fellow mutineers, may have had a very narrow escape indeed. The *Naval Chronicle*, Vol. III, p. 498, quotes an extract from the Anson's captain's report.

3 *Naval Chronicle*, Vol. V, p. 533.

dence), he ran into Lieutenant Niven and was instantly seized. He was tried at Sheerness on the 10th, Lord Proby appearing as prosecutor, and insisted that he was Samuel Higgins an American seaman, and that a mistake had been made; Lord Proby he denied ever having seen before. Unfortunately, when Niven arrested him he had incautiously blurted out that the mutiny had been 'all Lord Proby's fault', though he got over this with a story of how he met Jackson and Feeny at Bordeaux and heard about the mutiny from them.

The defence MacDonald put up reads most convincingly. He must have been a very plausible man, and plainly the court was not happy in its mind. Lord Proby was definite enough, however, and vehemently corroborated by Niven. 'Do you know the prisoner?' the latter was asked. 'I do, perfectly', he replied. A little later the question was repeated: 'Are you positive the prisoner is the man?' 'I am as positive that the prisoner is the man, as that I exist', was Niven's answer. And that settled the fate of MacDonald.

Bound up with the papers of his case one may still see his final appeal for mercy, insisting to the last that a mistake had been made, and carefully and boldly signed 'Sammuel Higgins'. Next to it is his certificate of American citizenship, signed by the American consul at Lisbon and dated 27 December 1798. It is a stiff yellow document, much worn and faded, the paper very thick, and states that Samuel Higgins, aged twenty-five, height 5 ft $7\frac{1}{2}$ in., blue eyes, is a native of Hadden, Connecticut. Even now there is something pathetic and appealing about these two papers; or there would be if they were not followed by a third, which is from the townsmen of Hadden, denying all knowledge of him. According to the *Naval Chronicle* he behaved 'with the most hardened depravity to the last'.

There is a good deal that is mysterious about John Williams, ex-privateersman of *le Bordelais*, ringleader of the *Danae* mutiny, and, at the time of his capture, seaman on board the American ship *Statira* in Jersey. The *Statira*'s mate, Mr Shanks, informed against him, and they took him with difficulty. He had a pocket-book written in French which he made desperate efforts to throw overboard, but it hit the rigging and fell back on the deck.[1] He was tried on board H.M.S. *Gladiator* in Portsmouth Harbour on 12 September 1801, and sentenced to the same fate as the others.

It is unprofitable to pursue the fates of the rest of the mutineers. A rumour reached England that some had embarked on board two privateers of Bordeaux, *la Bellone* and *la Grande Mouche*.[2] Of these, the first lost

1 This pocket-book was sealed up by the Prince de Bouillon and produced, with an English translation, in court. But the minutes are provokingly silent as to its content, and it is not with the other papers in the P.R.O.

2 *Naval Chronicle*, Vol. IV, p. 340.

most of her men in a fierce action off the Portuguese coast in November 1800, while the following March the other was driven ashore and destroyed off the western islands of Spain by H.M.S. *Diamond*. It is a fair assumption that these two actions may have ended the careers of some of them. A few asked that they might work on the land. Their request was granted, although not perhaps in the way that they intended, and they found themselves drafted into the Légion Nantaise de l'Armée de la République. This happened to John Brown, Richard Galvin and David Murphy, all Irishmen.

There is an unexpected sequel to the affair of John Williams. When one considers the case against him, that he was certainly out of a French privateer and possibly a renegade; that upon the evidence of several witnesses for the prosecution he had played a leading part in the mutiny, and that he had been sufficiently distinguished to be summoned to Paris; it is all the more surprising that he should have been pardoned. But pardoned he was, and Lord St Vincent, not remarkable for his tenderness towards mutineers, signed the letter conveying the Royal Pleasure to Admiral Milbank at Portsmouth.[1]

It seems that Williams had been rather more successful than MacDonald in establishing a claim to American citizenship. At any rate the American Minister in London felt himself in a sufficiently strong position to write a most peremptory letter to the Secretary of State, Lord Hawkesbury, which was forwarded to the Admiralty (without comment), on the very day Williams faced his court martial. The question depended not so much on whether he was an American citizen as whether he was a pressed-man or a volunteer, and here there was an element of doubt—of which the prisoner received the benefit. It would be interesting to know the private thoughts of Lord St Vincent on the matter.

So ends the story of H.M.S. *Danae*. The French Navy did not want her back after all that Plymouth dockyard had done to her, the damning conclusion being that she was 'impropre au service dans la marine de l'Etat en raison de son défaut de marche'. So she was sold, on 4 September 1800, for 41,700 francs to a certain Citizen J. Bérubé who was acting on behalf of a mysterious individual named Cooper. And here the trail peters out, for (as far as I have been able to discover) nothing is known of this man, why he bought the ship, or what he did with her. Documents at Brest which might have helped were destroyed during the last war and so, unless new material comes to light, it seems that the later history of the French National corvette *La Vaillante* which became for a while H.M.S. *Danae*, must remain a matter of speculation.

1 P.R.O. Out-letters relating to courts martial, 1800–03, Adm. 2/1120.

Sources

Six volumes of court martial minutes in the Public Record Office provide most of the material. These are:

Adm. 1/5350 for Mr Chubb the *Danae*'s carpenter.
1/5351 for Captain Searle for the loss of the *Ethalion*.
1/5353 for Lord Proby, officers and crew of the *Danae*.
1/5354 for John Marret.
1/5356 for John MacDonald.
1/5358 for John Williams.

Also:

Adm. 51/1273. Captain's Log, H.M.S. *Danae*.
51/1306. Captain's Log, H.M.S. *Boadicea*.
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36/12266. Muster Roll, H.M.S. *Danae*.
2/1120. Out-letters relating to Courts Martial (1800–02).
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THE KARACHI FISHING BOATS

By Basil Greenhill

THE article which follows is based on notes made at Karachi, at the nearby fishing village of Ibrahim Haidri, or Hyderi, and on the adjacent coasts, at intervals between October 1951 and February 1954. Since then some notes on the Karachi fishing boats, together with the lines, sail plans and contructional details of some of the principal types have been published by the Food and Agriculture Organization of the United Nations, first as Paper No. 15 of the International Fishing Boat Congress held in Paris and Miami in October and November 1953, and subsequently in the book *Fishing Boats of the World*. This paper was prepared by Dr Rahimullah Qureshi of the Pakistan Government, and Jan-Olof Traung of the F.A.O. The drawings are by Henry Magnusson, and the paper contains comments by Howard I. Chapelle. It approaches its subject from a practical stand-point, and has a practical question to ask and answer, that is whether, and if so how, some of the local craft can be adapted to power to improve their efficiency as fishing units. The following article emerges from discussions with Jan-Olof Traung and Howard Chapelle in New York in the autumn of 1954 and is meant to supplement the information contained in the F.A.O. paper from the nautical archaeological point of view. It differs from the F.A.O. paper in one or two small details, I have classified the various types of *hora* slightly differently, and I have described an additional class of vessel, the *bhart*. I am most grateful to Howard Chapelle and Jan-Olof Traung for their assistance.

The sea coast of West Pakistan is divided into two parts. The first, comprising the coasts of Makran, Las Bela, and the administrative area of Karachi, consists mainly of low cliffs backed by an arid hinterland. It has only one good harbour, and that largely artificial, at Karachi. The Sind coast, south of Karachi, is of quite a different kind. It comprises the mouths, old and new, of the River Indus and is a maze of creeks and muddy islets. It is said locally that a boat can work down through this delta from Ibrahim Haidri as far as the Indian border without venturing into the open sea.

The sea off both parts of this coast is rich in fish. The town of Karachi was once itself a fishing settlement and it has been steadily expanding for many years, especially since the partition of the Indian subcontinent in 1947 made it into the capital of Pakistan. There is, in consequence, a large and growing local market for fish.

There are five main types of local fishing boat, each with its variants. These five types divide themselves into two distinct classes. As named by their crews on the beaches of Ibrahim Haidri and in Karachi's pleasant little fishing-boat harbour, the first class, the *hora* group, comprises three main types, the *toni*, the *ekdar hora*, and the *hora* proper. The second class comprises two types, the *bheddi*, or *bedi*, and the *bhart*.

The hora *group*

The first of these classes, the *hora* group, begins with a dugout and, in ascending order of size, goes through the dugout with added planks and the plank-built boat with a dugout base, to end in a plank-built boat up to 68 ft. in length. The *horas* are almost entirely fishing boats, though a few carry cargo in the Indus creeks, and others do general waterman's work in Karachi harbour. As far as I could determine all the plank-built boats of this type are built by the same method. They are first planked up, the strakes being joined edge to edge with metal pins. The frames are subsequently cut to fit the planking and inserted into it. The boats in this class at first sight might appear to present a complete evolutionary series from the dugout to the large fully framed and planked-up sea-going boat. There is a strong family likeness through them all. Apart from the fact that they are all built the same way, a steeply raking sternpost with a long narrow rudder lashed to it, which does not project below the long straight keel, rounded forefoot and straight stem, head ornaments and low freeboard, are characteristics of these long narrow boats of all sizes. The name would seem additional evidence. It seems to be yet another local Arabized form of *hodi*, 'the term applied on the Bombay coast to narrow double-ended plank-built boats of canoe shape'.[1] Elsewhere[2] Hornell has described the *hodis* of Bombay as widened copies of the ordinary Malabar dugout, sometimes on a dugout base. Some Arabs use another local form of the word, *huri* or *hori*, to describe a simple plank-extended dugout canoe, usually of Indian origin. In Ceylon a plank-extended dugout with outrigger is called an *oru*.

But in the larger *horas* it is evident that outside influences have come into play. The sections change markedly once a certain size is reached. The deep U of the dugout gives way to rather flat floors and sometimes a rather sudden turn of bilge and flaring sides. The length-beam ratio changes from the 1 in 7 or 8 of the smaller *horas* to 1 in 4 or 5, though in the middle sizes two *horas* of the same overall length may lie side by side on the beach which are opposite extremes as far as length to beam ratio is concerned. It

1 Hornell, 'A tentative classification of Arab Sea Craft', *Mariner's Mirror*, Vol. 28, p. 30.
2 Hornell, 'The sailing craft of Western India', *Mariner's Mirror*, Vol. 32, p. 209.

might perhaps be permissible to conjecture that the larger *horas* have developed because a people used to working with plank-extended dugouts needed larger, but cheap, boats, and built them with the aid of builders accustomed to the traditional Arab/Indian designs for larger fishing craft.

The *toni* (the term is also used on parts of the Indian coast) is used for line and cast-net fishing, and is simply the ordinary imported Indian dugout of the kind which is found in varying forms all the way from southern India around the shores of the Arabian Sea. The Karachi type is one of the simpler variants. She is from 6 to 20 ft. long, flat sheered and with little ornament save paint, her deadwood at either end pierced for tow ropes. She is not expanded, but, on the contrary, often has a slight 'tumble home'. She has inside the transverse bands, left when she was hollowed out, in low relief at intervals across the bottom and up the sides, which Hornell saw[1] as possible evidence that these dugouts were the successors of bark canoes. She also frequently has substantial sawn frames and half frames. As she grows older these become more numerous. She is paddled or rowed by one or two men. Even the smallest *tonis* are sometimes equipped with a short mast and a small lateen sail set from a very light yard. This sail is used off the wind, even under what appear to be very dangerous conditions, but the *toni*, although used to communicate between the islands of Karachi Harbour and the shore, even during the south-west monsoon, is rarely if ever seen in the open sea. *Tonis* are used as tenders to larger fishing craft, and the larger *horas* and *bheddis* often carry one on the quarter.

The term *ekdar hora* means a *hora* built of one piece of wood, that is in practice a *hora* built of planks on a dugout base. It appears to be used fairly loosely by the fishermen themselves to describe a whole group of boats, ranging from a dugout with a few planks added to its sides to a great fully plank-built boat which may be 45 ft. long. Although the term should strictly speaking be confined to boats which have a dugout in their construction somewhere, I shall in this article use it as a type name to describe all those *horas* which follow the dugout in their general proportions.

J. H. Hutton, in reviewing Hornell's *Water Transport*,[2] suggested that the dugout's transverse bands in low relief represented an imitation of the ribs of plank-built boats, rather than a memory of the ribs of highly developed bark canoes. The dugout-based *ekdar hora*, if this is so, shows a fine combination of reality and symbol, for her sawn frames are rarely placed to coincide with the raised bands which remain visible on the bottom and sides of the basic dugout. In the smaller boats this dugout determines the overall length of the vessel, since she narrows away at bow and stern as

1 Hornell, *Water Transport*, p. 187.
2 *Mariner's Mirror*, Vol. 33, p. 129.

the dugout dictates. Even with these little boats the planks may extend the sides, so that the dugout base is less than half the depth of the finished boat, while the characteristic steeply sloping stern post and vertical stem of the *hora* are built on.

With the next larger size of *ekdar hora* it is difficult to see where the dugout ends and the planks begin. The basic dugout, her ends sawn off, is extended with plank contruction at bow and stern, as well as above her sides, so that the finished boat is sometimes twice as long as the original. When the dugout is itself repaired with planks let into the skin it becomes yet more difficult to see how she is built.

In recent years even the smallest of *horas* have been wholly plank-built. The majority of them are still close imitations of the plank-extended dugout, but I have seen a *hora* under construction at Ibrahim Haidri only 15 ft. long which had the flatter sections and broad beam of the bigger boats in this group. Above a certain size all *horas* are plank-built. At about 45 ft. another change begins to appear, and although some *horas* of this size retain the proportions of a dugout, and are in fact great long narrow canoes, others acquire depth and beam and flat floors and dish-shaped mid-section, while retaining the same general appearance. It is these latter craft which the fishermen speak of simply as *horas*.

The *ekdar hora*, with her canoe-like proportions, is a fast, unstable, craft. In all sizes she needs some kind of balancing device. Depending on her size, the season of the year, and the sort of waters in which she is fishing, this can be anything from a single shifting balance board which is changed from side to side, tack-and-tack, to a lash-up of two fixed balance boards on one side and an outrigger float on two long poles on the other side. (I fear that Hornell was in error when he said[1] that Bombay 'marks the northern limit of the habitual use of this stabilizing device (the outrigger) upon the west coast of (undivided) India'.)

An *ekdar hora* working habitually in the creeks of Karachi harbour may, during the cold weather, have no more aids to stability than the one balance board. A boat of identical size and shape, working in more exposed waters during the monsoon, may have the double balance boards and outrigger. Under different circumstances she may have the outrigger alone or with a single fixed balance board. Her own shape and the sailing characteristics imposed by that shape will also determine what balancing devices she needs to use.

The outrigger float, sometimes cut from a solid timber but perhaps more often built up from laminations, has a sharp entrance flaring out rapidly to

1 Hornell, 'The sailing craft of Western India', *Mariner's Mirror*, Vol. 32, p. 210.

a very flat section in the middle, so that it appears to derive its lift not only from its own buoyancy but also from a planing effect, and it slows up the boat less than might be expected. The outrigger poles are braced with cross-pieces and sometimes with stays from their outer ends to bow and stern. When there are two fixed balance boards the foremost one of the two is longer than the aftermost and is braced with a heavy rope, often fitted with a tackle, from the mast head.

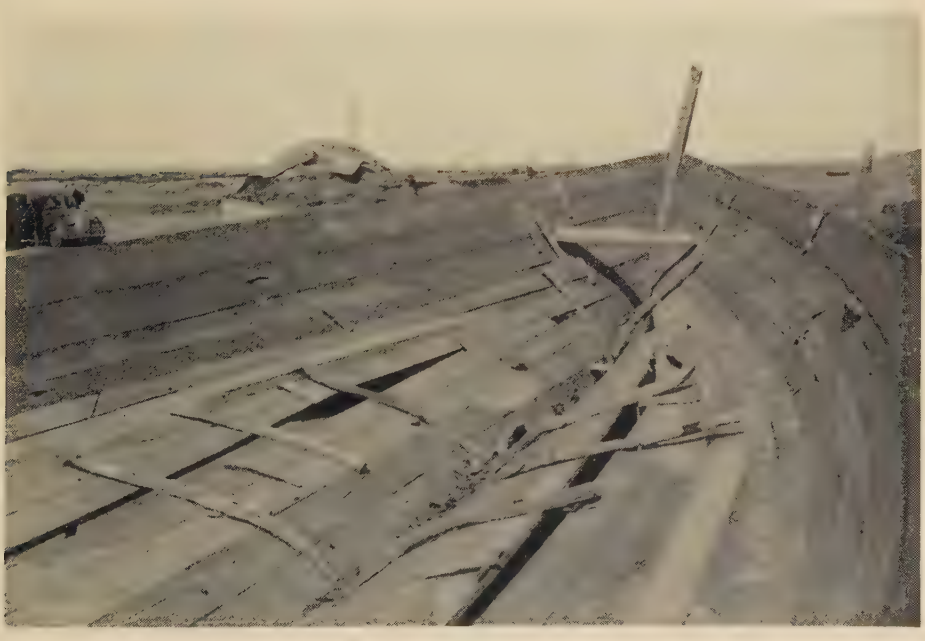
A variation of the *ekdar hora* is used on the surf-beaten coast west of Karachi. She has a curved stem and stern post, quite different in shape from those conventional in the *hora* group, and a movable rudder which extends below the keel and hangs with ordinary gudgeons and pintels, so that it can be removed for beaching. As might be expected, this type of *hora* does not appear ever to be fitted with an outrigger. It is possible that she has developed separately from the main *hora* group, perhaps on a different part of the west coast of the subcontinent.

The *hora* proper retains a good deal of the general appearance of the *ekdar hora* and her long straight keel, parallel with the water-line, but her sections are quite different. She is still a great long open boat (she may be over 65 ft. long), but she has a rather full midships section with rather flat floors and flaring sides. She needs neither outrigger nor balance boards, but she does carry fixed rock ballast inboard and movable ballast in the form of sandbags on deck. She can, of course, sail on either tack at any time, but I have never seen any kind of *hora* go about without being rowed round—the consequence no doubt of the long straight keel. She is steered with a tiller, which is fixed at an angle pointing downward from the high rudder head. She has at both bow and stern two stanchions connected by a cross-bar on which the yard rests when in harbour. She has only short permanent decks at the ends and no more than crawling space as shelter for her crew. Her rudder is still secured to the stern post with rope lashings.

The construction of the horas

The building of a *hora* begins with the laying of her keel along the top of a series of short posts driven into the ground until they project 18 in. or 2 ft. above it. This keel is usually in one piece. A curved stem piece and a straight stern post are secured to this keel by a rather flimsy joint, often they are simply spiked to the top of the keel. A few floor moulds are then sometimes fixed across the keel and the garboard strakes are fitted. They are fastened to the keel rabbet with galvanized spikes driven through the edge of the planking in slots cut out in advance, but the rest of the planking is joined edge to edge with galvanized iron pegs or pins about $\frac{3}{16}$ in. in

(*a*) *Bharts* and cargo-carrying *bheddis* discharging firewood into camel carts at Ibrahim Haidri.



(*b*) The three-quarters planked-up hull of a big *hora*.

(*Facing p.* 58)

(*a*) A medium-sized *ekdar hora* sailing across Karachi harbour during the monsoon season. The boat is travelling very fast. The outrigger float is totally immersed and the whole crew, including the helmsman, are out on the balance boards.

(*b*) The hull of a big *bheddi*.

diameter, the holes for which are drilled out to a depth of 1 or 2 in. in both planks. Owing partly to the chronic shortage and the high price of timber, and partly to the difficulty of planking at the turn of the bilge the underwater parts of the *horas* are built up jigsaw fashion out of comparatively short runs of available timber. The local boat-builders, who apparently find planking towards the turn of the bilge especially difficult, often leave this part unfinished until the top-sides have been built up. Meanwhile, the gaping fabric is held together with short lengths of rough timber tacked in place here and there, as may be required. Similar short lengths are used at the rabbets of the stem and stern posts, and to hold each plank as it is fitted, but, apart from the occasional use of a few battered and temporary floor chocks, which from their appearance have determined the shape of the underwater body of many *horas*, and an occasional futtuck mould, no moulds are used, and the finished planking is a hollow, flimsy shell to which the frames are cut to fit, and into which they are inserted.

The *hora*, in her later stages of planking, requires very few struts and braces to support her, and the long, easy curves of the planks require but little shoring and clamping. Unlike the river boats of East Pakistan, whose complicated shapes need a forest of struts and braces to maintain them before framing, a *hora*, fully planked, seems to need only a few rough poles under her bilge to keep her upright, and no shoring to keep her in shape at all. Her shape is essentially an easy one to construct, with many of the seams parallel for much of their run, and the difficult planking at the bilge reduced to a minimum. The plank ends join the stem and stern post at easy angles. *Horas* can be quickly and comparatively cheaply built. I have counted as many as fifteen of lengths from 15 to 55 ft. under contruction at the same time on the beaches of Ibrahim Haidri.

When the planking is complete, or sometimes when it is two-thirds or three-quarters complete, the *hora* is framed up. Soft-iron rods are bent to fit and used as patterns. The number of frames she will have depends within certain limits on the amount of money her future owner can afford to spend. I have seen *horas* of the same size and apparent age, one with twice as many frames as the other. The frames are sawn, and fastened with galvanized iron spikes, driven through planking and frame and clenched over inside. They are usually laid alternately, full frames with floors, and half, or false, frames which do not touch at the keel. Framing seems usually to start amidships, working outwards to bow and stern. There is usually one riser aside on which rest numerous massive thwarts. In addition to these thwarts, one or two extra large beams are fitted in the large *horas* and iron straps are used as well as wooden knees. On the largest craft two or three extra beams are fitted at gunwale level. Whatever the size of the *hora*, there are

very short permanent decks at extreme bow and stern, while the larger craft have temporary decks laid on the thwarts. Big *horas* have an icebox and galvanized iron fresh-water tanks, but these are modern additions. In the final stage in building, the *hora* is caulked with cotton, another local product, and she is varnished with locally made fish oils.

According to the fishermen early *horas* were fastened with wooden pins between the plank edges and treenails for the framing and planking. I never saw her myself, but I was told that in 1952 there was still one boat in commission at Ibrahim Haidri which was built in this way. It is perhaps of psychological, if not directly of technical, interest, that she was spoken of as being a fast, seaworthy, craft. Such a method of fastening might perhaps suggest influences on the development of the *hora* from yet a further source, because the planking of many of the river boats of the Indus, and of the boats of the snipe marshes of central Sind, is secured edge to edge with wooden pins, though the method of fitting them is different from that used with the iron pins of the *horas* to-day.

Sails and seamanship

The basic sail of a *hora*, of whatever size, is a settee with a very short luff. Sails on the whole tend to be well shaped and well cut. Even the smallest of plank-extended dugouts sometimes have provision for a mizen mast which is stepped during the period of light variable winds from October to March. In small *horas* the main mast is sometimes stepped off centre on the outrigger side, where the sail usually works. Thus the sail is kept out of the boat. A smart *hora* with two shapely settees set, cutting along over the deep-blue winter sea before a smart breeze, is a very lovely sight. At this season of the year larger *horas* set jibs from temporary bowsprits and triangular topsails above their lateen yards as well as stepping mizen masts. I have seen a small *hora* in Karachi harbour with two settee sails of the same size set from her mainmast. During the calm weather sails are frequently wetted to bring the *horas* back to harbour more quickly on the evening breeze.

During the period of fresh to strong west to south-west winds, which lasts from April to September, *horas* use a single sail, usually of smaller dimensions than that set from the mainmast in the cold weather, and often showing signs, in patches and renewals, of the harder wear to which it is subjected. Even small *horas* of the *ekdar* type fish far off shore until well into the monsoon season. I have myself seen an outrigger and balance board *hora*, some of her crew out on the boards, one standing up there, far out of sight of land in heavy seas as late as 6 May. But during the heavy

winds and the south-west monsoon of June, July and August, many *horas* are laid up, or confine their fishing activities to Karachi harbour or to the creeks of the Indus, though I have seen a *hora* of the beach-boat type from west of Karachi rowed and paddled across the bay from Buleji village many times at the height of the monsoon season.

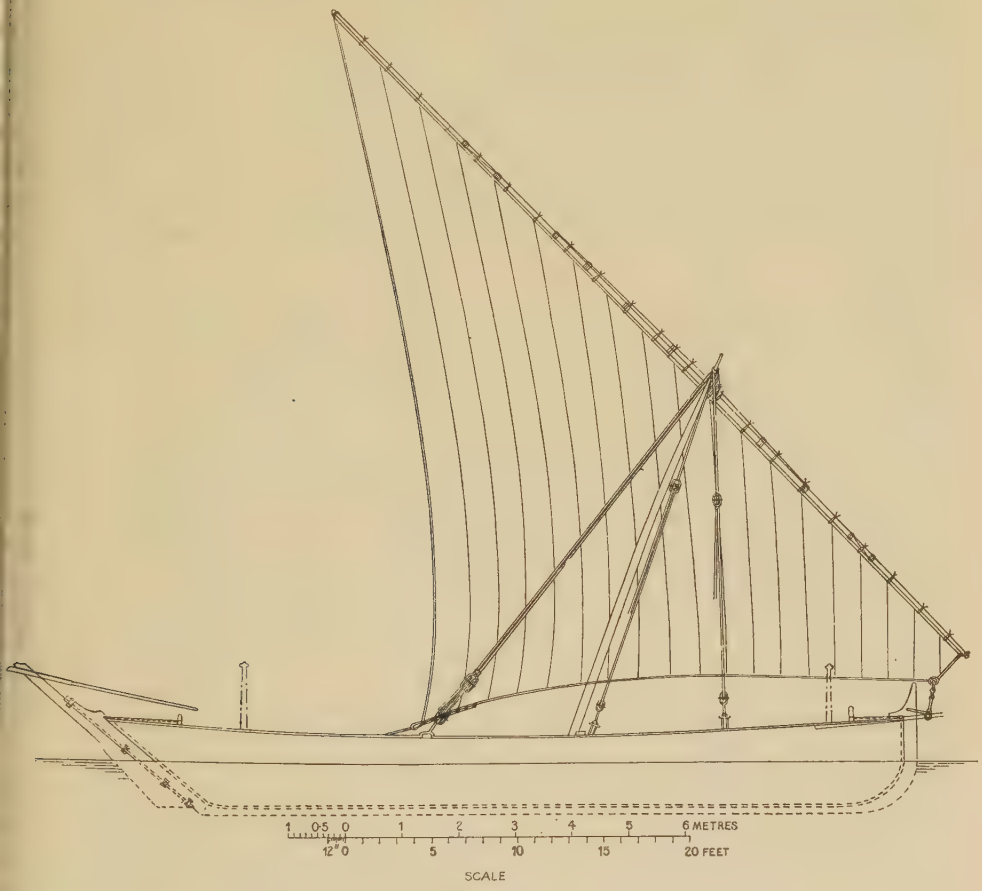


Fig. 1. Sail and sheer plan of a medium sized *hora*.

One way of telling an *ekdar hora* from a *hora* proper, even though there might be at a given time no evidence about her of balance boards or outrigger, is by the fact that she steers with a yoke and lines like a rowing skiff. This is to enable the whole crew, including the helmsman, to ride out on her balance boards. The long, lean, 45 ft. *ekdar hora* sails fast in the summer breezes, and it is a remarkable sight to see one of these great open boats tearing across Karachi harbour quite empty, the whole crew squatting

and standing out on the balance boards to windward, while the helmsman, quite unconcerned, a line gripped in each hand, holds her to her course, though the rudder is 20 ft. away and his lines at 30 degrees to the keel of his boat.

Many large *horas* have pleasing traditional designs, which are kept carefully painted, at bow and stern. Vestigial oculi appear, sometimes in the form of a crescent and star, sometimes of a star alone. Many of the boats are named and bear their names on bows and quarters. Tillers are heavily decorated in white and blue paint. The larger boats are protected below the water-line with a locally made preparation, white in colour, which is frequently renewed, smeared on with the palm of the hand dipped into tin or enamel bowls. The crew sing at this kind of work, and even stop occasionally to dance and skylark, especially if they know that they are being watched.

The F.A.O. paper gives details of the kind of fishing done by each class of *hora* and by the *bheddi*. Suffice to add here that the small *horas* fishing inshore in the cold weather often do so in fleets, taking in their sails and unstepping masts as well when they are on fish. These small fleets sometimes follow the birds that feed on shallow swimming fish, fish driven to the surface by other fish preying upon them, so that the delicate, waterspider-like *ekdar horas* have the appearance of opening and closing their own wings and feeding off the same fish as do the birds. The waters off Karachi are very rich in sea life. The shoals of small fry are sometimes so thick that they pitter-patter along the sides of the boat as she sails quietly along, and when racing a 14 ft. dinghy I have more than once been disconcerted by fish jumping into the hard-driven boat.

There are two types of models of *horas* to be bought around Karachi. Rough, but accurate, models are made at Ibrahim Haidri and sailed by the local children in the creek. Better finished, but less accurate, models are made on the islands of Karachi harbour and hawked at higher prices in the town and on the beaches. Both types sail very well. On demand the model-makers can produce representations of other local craft, and I have a pleasing model of a *bheddi* which is accurate in most respects.

The bheddi *and the* bhart

The *bheddi* and the *bhart* are boats of a type and presumably an origin completely different from the *hora*, though, as I have already suggested, similarities in sections and construction may indicate that they have perhaps influenced the development of the *hora*. *Bheddis* are less numerous than the largest type of *hora*, which is their equivalent in that group. *Bharts* as

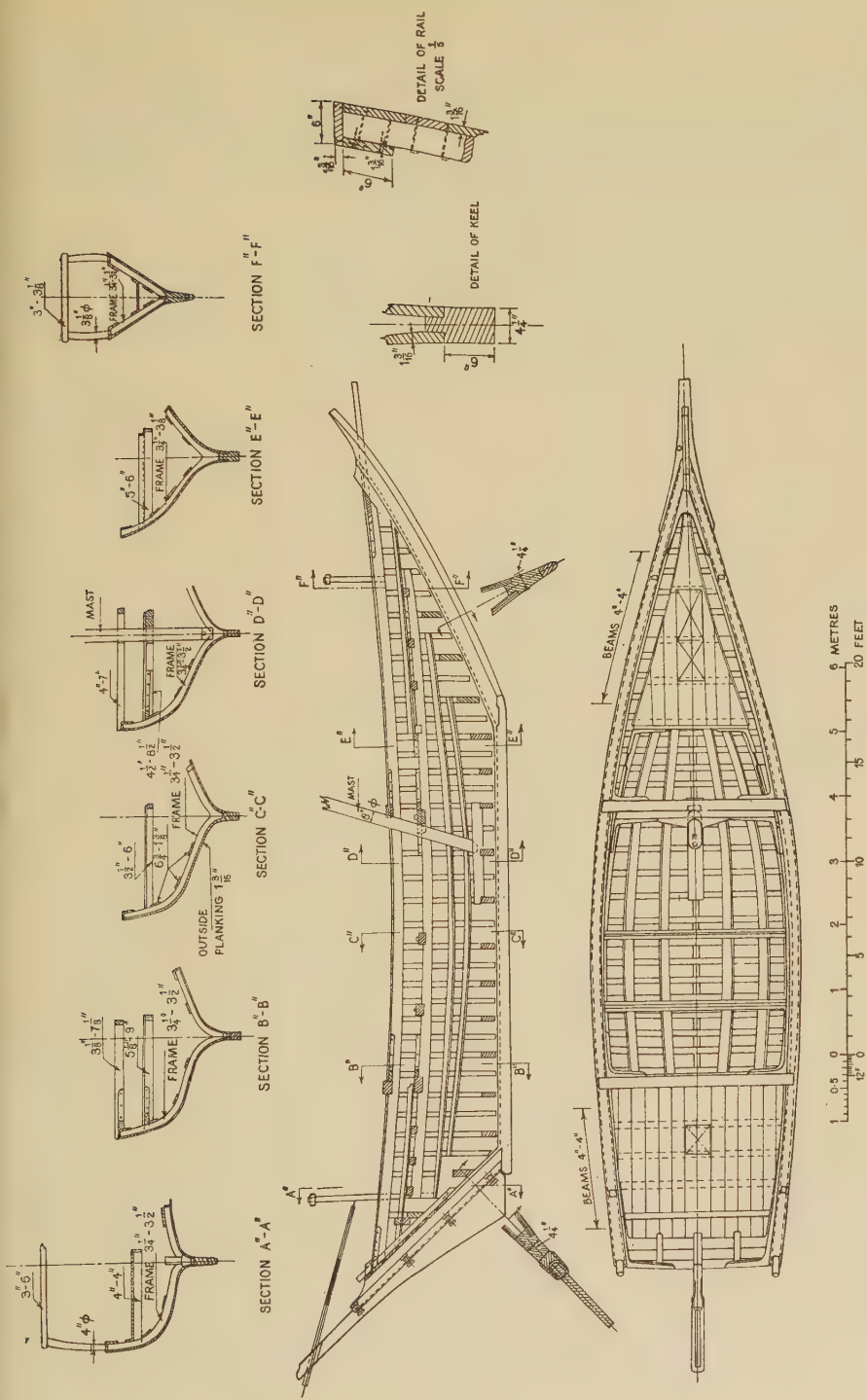


Fig. 2. Construction drawing of a medium sized *bheddi*.

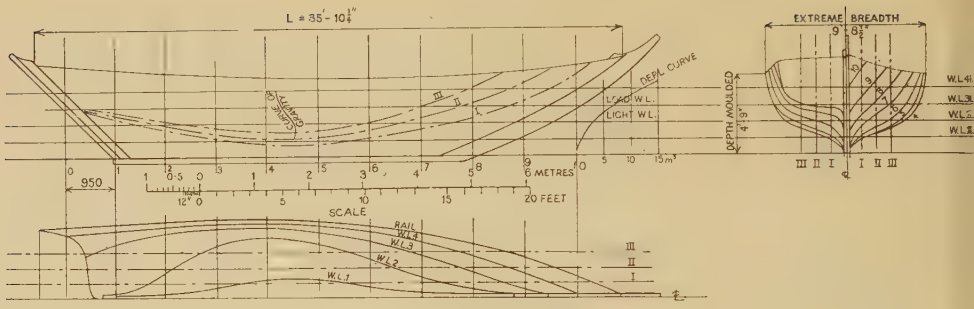


Fig. 3. Lines of a small *bheddi*.

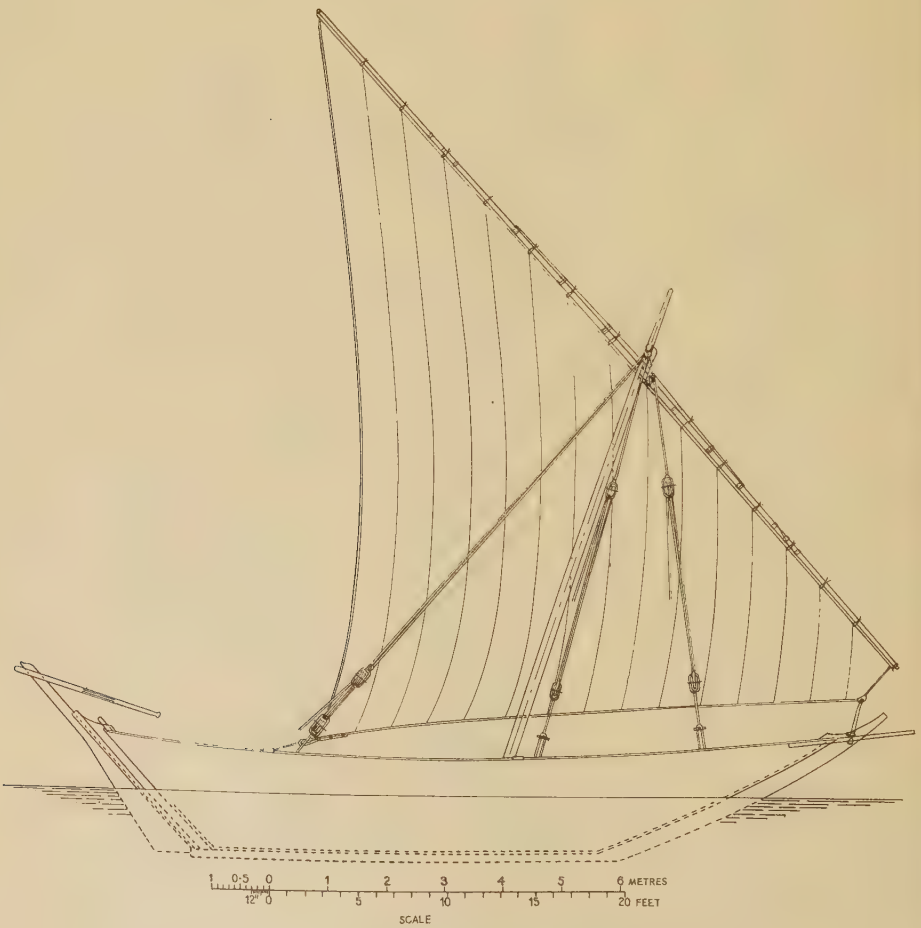


Fig. 4. Sail and sheer plan of a medium sized *bheddi*.

fishing boats are few, though perhaps they are the principal cargo carriers on the Indus creeks. *Bheddis* serve as cargo carriers as well, in smaller numbers, and many small *bheddis* do general waterman's work in Karachi harbour—the famous Karachi 'bunder boats' are really small *bheddis*. The *bheddi* is a comparatively short-keeled boat in the shape of which Arab influences appear to predominate. She has the long overhanging bow of the type usually called *grab* and a sloping transom stern. Her keel is parallel with the water-line. Her quarters are very full, with rather flat buttocks and her greatest beam well aft. She has a marked rise of floor, hollow garboards and a hard turn of bilge. The water-lines are often quite hollow at bow and in the run. Unlike the *horas* she has long fixed decks fore and aft, though the greater part of her is open. Only in her smallest forms does she require a balance board, though most *bheddis* have inside ballast of rock and the larger ones have movable sandbags on deck as well.

But the *bheddi* is usually a big boat, of from 40 to 70 ft. long. Her keel, stem, and stern post are more complicated in construction than those of the largest *horas*, but her framing follows the same pattern. There is evidence that the *bheddi* is a dying type. Her construction is more difficult, more complicated, a longer and more expensive business than the building of a *hora* of the same size. Laid-up *bheddis* can be seen all around Karachi most of the year round. Except in the monsoon laid-up *horas* are a rarity. While *horas* of all sizes are built by the dozen, I have never seen a *bheddi* under construction, and moreover, the fishermen themselves tend to speak of them as a type of craft now being replaced by the larger sizes of *hora*. If this is so it is a pity, for the *bheddi* is a beautiful and seaworthy type of boat, easily driven. She is, as Howard Chapelle has said, 'a boat one would like to have'.

As a result of the absence of *bheddis* under construction on the beaches around Karachi, one question about them remains unanswered. It is not clear whether they are built on pre-erected frames, or whether the planks are edge joined, like those of the *hora*, and the frames inserted. Such statements as I have been able to obtain from the fishermen themselves were all to the effect that the *bheddis* were built edge-joined with inserted frames. But the *bheddis* were well built, and I did not find one in a state of disintegration sufficient to be able to confirm the existence of edge joining. But the *bheddi* has surely influenced the *hora* in her sections, in several of her main constructional details, in the head ornament of decorated extensions of sheer-line and stem, the latter vertical in the *hora* and at 45 degrees or so in the *bheddi*, and so it is not impossible that she has transmitted her system of construction as well. Moreover, the framing of some laid-up *bheddis* which I was able to examine had certainly not been pre-erected. It comprised

odds and ends of grown timber of irregular shape with no attempt at end joining between the various pieces, so that the planking itself and the stringers provided the only continuity in the boat's construction. It may be, of course, that these *bheddis* had been completely reframed, but this seems unlikely. Moreover, if they had been reframed it seems unlikely that builders who had constructed this type of boat with pre-erected frames would reframe them in the manner I have described.

The existence of edge joining and inserted framing in the *hora* of the largest sizes poses an interesting problem as to the extent of inserted frame construction on the west coast of India generally. If the *bheddi* is of the same construction this problem becomes more important and even more interesting. As I have already indicated, a form of edge joining is in use in the construction of the Indus River boats. Edge joining with inserted frames is almost universal in the river and sea boats of East Pakistan, where several different systems are in use. I hope to describe these East Pakistan boats in due course in the *Mariner's Mirror*.

The *bhart* is a *bheddi* with a *hora's* pointed, sloping, stern, and because in the same length the lines at the stern must be brought to a point she appears more beamy and fuller in section than her sister. I have seen a few *bharts* fitted out for fishing, but the *bhart* is really the big carrier of the northern Indus delta and lines of them are to be seen in the cold weather discharging their loads into camel carts at the tideline on the beaches of Ibrahim Haidri. She has a burdensome hull to drive and her mizen-mast appears sometimes to be stepped permanently. When piled high with cargo she is sometimes fitted with movable sideboards above her bulwarks. She is often well maintained, as are many of the Karachi craft, with sheerline picked out in a colour pattern, and decorated stem head and sternpost. She sometimes has vestigial oculi on her quarters. She has the same head ornament as the *bheddi*, and the rudder head is often carried far above the sternpost, so that the tiller has to point down at an angle of 30 to 40 degrees.

Acknowledgement

The plans of the boats in this article are reproduced by courtesy of the Food and Agriculture Organization of the United Nations from the book *Fishing Boats of the World*, published by Arthur J. Heighway.

RECORDS

A MEDIEVAL CORDAGE ACCOUNT

By Vice-Admiral Sir Richard Lane-Poole, K.B.E., C.B.

Mathew de Torkeseye's account with the Exchequer, which follows is transcribed from P.R.O.–E 101/27/15. Mr J. T. Tinniswood, at my request, has kindly interpreted the nautical terms and his notes are appended to the account. The account covers the years 32 to 37, Edward III (1358–63), during which time the ships concerned were occupied in transporting Edward III to Normandy (1359) and The Black Prince to Bordeaux, where he took up residence as Prince of Aquitaine in 1363.

Bridport supplied most of the cordage for the King's ships up till the first quarter of the fifteenth century,[1] but it is not clear from this account whether the rigging, etc. was always made up there, or the yarn supplied from Bridport and made up elsewhere. There is good evidence as far back as 1213[2] of rope made in Bridport, but a curious document in the Bridport Corporation archives[3] dated 1277 appears to record transactions between that place and Plympton whereby hemp was shipped from Bridport to Plympton, spun into yarn at the latter place and shipped back to Bridport where it was made up into rope.

Fuller, writing of hemp in the seventeenth century, says: 'England hath no better than what groweth here between Beaminster and Bridport, the use whereof is of absolute necessity for cordage, clothing etc.; so that a man may admire that thread, being so profitable, and our land affording so much strong and deep ground proper for the same, so little is grown thereof!'[4] Fuller's was a voice crying in the wilderness, as England became steadily less self-supporting in cordage.

It would be interesting to know what was meant by white, bastard and black thread. Perhaps the publication of this account will evoke enlightening comments from rope-makers and marine antiquaries.

E 101/27/15. ACCOUNT OF MATHEW DE TORKESEYE CLERK OF THE KING'S SHIPS. 32.37 Edw. III, 1358–1363

'Articulars of the account of Mathew de Torkeseye, Clerk of the King's ships, as well of the money by him received at the receipt of the King's Exchequer upon the buying of Hempen Thread for cabels, ropes and other necessaries for the ships aforesaid, as of the costs and expenses and deliveries by him appointed for the buying and delivery of the same from the Feast of St Michael in the 32nd year to the second day of February in the 37th year by view and testimony of Roger de Sutton, controller of the same Mathew; that is to say:

'eceipt of money at the Exchequer

The same answers for 165 li 3*s.* 6½*d.* received from the Exchequer on 26 Nov. 34th year from Roger de Sutton upon the buying of hempen thread at Brydeport for the King's ships.

And of 81 li. 11*s.* 10*d.*, received from the same on 11th December in the 36th year upon the buying of white and black thread at Brydeport for the King's ships aforesaid.

And of 66 li. 13*s.* 4*d.* received from the same there on Saturday 29th October in the 27th year.

1 Oppenheim's *Accounts and Inventories of Henry VII.*
2 Hutchin's *Dorset*, Vol. II, p. 2.
3 Appendix to *6th Report of Historical Manuscript Commn.* p. 489.
4 *The Worthies of England* (1952).

And of 70li. 4*s*. 2½*d*. received from the same on Wednesday 5th July in the 27th year by the hands of Robert Bredde and his Associates of the town of Bryddeport, receivers of money.

Sum 453li. 13*s*. 11*d*.

Provided of white bastard and black thread at Brydeport

The same accounts for the buying of 14,912 lbs. of white hempen thread from William Hychecock, John Tracy, Edward Coterich and their associates at Brydeport, ropers for ropes thereof made for divers ships, barges, boats of the King by Roger de Sutton at Brydeport within the time of this account. Price of each 100(?) 2*s*.—238li. 11*s*. 2*d*.—and in buying 1882 lbs. of bastard thread from the same William John Edward and their associates by the same Roger for cordell for the same ships within the same time—price C...20*s*.—188li. 3*s*. 9*d*.

And in buying 2700 lbs. of black cordell from the same by the same within the time of this account price 100 (?) 10*s*.—13li. 10*s*.

Receipt of white thread bought

The same Matthew answers for 19 quintals, 2 stone 11½ lbs. of white hempen thread of Brydeport remaining on his account of the previous year for rope to be made for the ships etc., which made 1951 lbs.—each quintal accounted as 100 lbs.

And 14,912 lbs. of white hempen thread of Brydeport above received bought at Brydeport for divers ropes thereof made for the ships etc.

And 24 quintals of white thread of Brydeport received of John de Ralegh Sheriff of Somerset and Dorset in the 24th year for cordell thereof made for the same ships etc.

And 2400 each quintal accounted as 100 lbs.

Sum of white thread 17,271½ lbs.

Receipt of Bastard Thread

The same accounts for 18,922½ lbs. of bastard thread of Brydeport bought at Brydeport for divers cordells for the said ships etc. and 39 quintals 8 lbs. of the same received of John de Ralegh for cordell thereof made etc. which made 3,908 lbs. weight each quintal etc.

Sum 22,730 lbs.

Black Cordell Bought

The same answers for 2700 lbs. of black cordell of Brydeport bought there for the ships etc. and 4 quintals of black hemp thread of Brydeport received from John de Ralegh for cordell made thereof 400 lbs. as above.

Sum Black cordell 2700 lbs.
Black thread 400 lbs.

Delivery of Cordell la Naweseinte Marye

Of which the same accounts for the making of one cabel for caggynges and one hauser of white thread of Brydepport, for the King's ship called la Naweseintemarye and delivered to William Pieres master of the same ship on the 11th of August in the 33rd year for a voyage to be made upon the sea with the Lord the King towards France:

Namely the weight of the same cabel 500 lbs.
2 hausers for two trussropes weighing 266 lbs.
1 hauser for one couple of Hevedropes weighing 1516 lbs.
2 hausers for 2 gerdinges weighing 204 lbs.
2 hausers for 2 stetinges weighing 202 lbs.
1 hauser for 1 winderop—248 lbs.
1 hauser for 2 sheets weighing 160 lbs.
2 hausers for 2 polancropes weighing 245 lbs.

And for making 6 hausers of bastard thread of Brydeport for the same ship and delivered to William Peires the day and year aforesaid namely:

2 hausers for 2 couples of baksteies weighing 200 lbs.
2 hausers for hevedropes weighing 384 lbs.
2 hausers for boy ropes weighing 430 lbs.

And to the same William the day and year aforesaid of black cordell of Brydeport for the barge of the same ship, namely: 2 cordells for 2 couples of Hevedropes and two pair of sheets made thereof weighing 147 lbs.

1 cordell for 2 uptieghs weighing 159 lbs.
1 cordell for 1 forlock weighing 107 lbs.
2 cordells for haliers for les uptieghs and les steyes weighing 137 lbs.
3 cordells for toweropes and handeropes weighing 195 lbs.
1 cordell for rinesinges of les backsteies weighing 76 lbs.

Sum thread white 1857 lbs.
bastard 1002 lbs.
black cordell 857 lbs.

Delivery of Cordell for La Alice

And for making 9 hausers of white Brydeport thread for the King's ship called La Alice and delivery to John Ramm master of the same ship on the said 12th day of August in the 33rd year aforesaid for the same voyage. That is to say:

2 hausers for 2 trussropes 200 lbs.
2 hausers for 2 pulancropes weighing 184 lbs.
1 hauser for 2 bowlines weighing 200 lbs.
1 hauser for 2 lollers weighing 132 lbs.
1 hauser for 1 wyndrope weighing 222 lbs.
1 hauser for 1 uptiegh weighing 218 lbs.

And for making 2 hausers of bastard Brydeport thread for the same ship and delivered to the same John Ramm the day and year aforesaid viz:

1 hauser for one boterope weighing 250 lbs.
1 hauser for one boyrop weighing 102 lbs.

And the same John the day and year aforesaid for black Brydeport cordell for the same ship viz:

1 cordell for 1 stetyng triplici weighing 98 lbs.
1 cordell for one other stetyng triplex weighing 97 lbs.
2 cordells for two yerderopes weighing 134 lbs.

Sum white thread 1126 lbs.
bastard thread 340 lbs.
black cordell 305 lbs.

Delivery of Cordell for la Cogt Thomas

And for making 9 hausers of white Brydeport thread for the King's ship called la Cog Thomas for the same voyage and delivered to John Wille mate of the same ship on the said 12th day of August in the 33rd year aforesaid viz:

2 hausers for 2 bowlines weighing 192 lbs.
2 hausers for 2 trussropes weighing 180 lbs.
2 hausers for 2 polancre ropes weighing 204 lbs.
1 hauser for up tiegh weighing 210 lbs.
1 hauser for another up tiegh weighing 194 lbs.
1 hauser for one gerding weighing 92 lbs.

And for the making of 3 hausers of bastard Brydeport thread for the same ship and delivering to the said John Wille the day and year aforesaid, viz:

1 hauser for one boyrope weighing 102 lbs.
1 hauser for 2 shetes weighing 190 lbs.
hauser for 1 wynding rop weighing 204 lbs.

And to the same John the day and year aforesaid black Brydeport cordell for the same ship:

2 hausers and 2 boyropes and one couple of Hevedropes thereof made weighing 397 lbs.
Sum white thread 1036 lbs.
bastard thread 472 lbs.
black cordell 397 lbs.

Delivery of Cordell for la Maudeleyne

And for making 4 hausers of white Brydeport thread for the King's ship la Maudeleyne for the same voyage and delivered to William de Asshelden master of the said ship on the said 12th day of August in the 33rd year aforesaid viz:

1 hauser for 1 wynding rop 304 lbs.
1 hauser for 1 boterop weighing 200 lbs.
2 hausers for 2 trusses weighing 200 lbs.
Sum of white thread 704 lbs.

Delivery of cordell for la George

Delivery of cordell for la Godbyete

And to John Ruck master of the King's ship called la Godbyete for the aforesaid voyage on the 12th August in the 33rd year of black Brydeport cordell:

1 cordell for 4 sheets weighing 132 lbs.
1 cordell for one wyndyng rop weighing 194 lbs.
1 cordell for one boterop weighing 95 lbs.
2 cordells for 4 boyropes weighing 140 lbs.
1 hauser for 1 Rytferop for the bonnets of the same ship weighing 75 lbs. and for 3 cordells for one upteigh 1 pair of steyes for the boat of the same ship and one rifferope for the sail of the same boat weighing 38 lbs.

Sum of black cordells 638 lbs.

Delivery of cordell for la Welyfare

And to Bartholomeu Steygeyn for the King's barge called la Welyfare for the same voyage on the 28th day of August in the 33rd year aforesaid of black Brydeport cordell:

2 cordells for 2 shetes weighing 78 lbs.
2 cordells for 2 uptieghs weighing 122 lbs.
2 cordells for 2 steies weighing 122 lbs.
4 cordells for 6 couples of Hevederopes weighing 190 lbs.
1 cordell for 1 halier weighing 59 lbs.
1 cordell for 1 boatrop weighing 74 lbs.
1 cordell for 1 bowline weighing 40 lbs.

Sum of black cordells 637 lbs.

Delivery of cordell for la Jonette

And for making 4 cabels and 10 hausers of white Brydeport thread for the King's barge called la Jonette and delivered to John Grene master of the same barge in the month of March in the 34th year viz:

Of the said 4 cabels each weighed 606 lbs.—2200.
1 hauser for shetes and lollers weighing 184 lbs.
1 hauser for uptieghs weighing 184 lbs.
1 hauser for 1 boterop weighing 184 lbs.
1 hauser for 1 wyndyng rop weighing 184 lbs.
2 hausers for 2 bowlines and 2 yerderopes weighing 184 lbs.
4 hausers for 2 trusses and 2 stetynges weighing 356 lbs.

Sum of white thread 3082 lbs.

Delivery of Cordells for the barge la George

And for making 1 cabel of 7 hausers of bastard Brydeport thread for the King's barge of the George and delivered to Thomas Moys master of the same at Hampton by the aforesaid Roger de Sutton in the month of March in the 34th year aforesaid, viz:

The said cabels and 5 hausers weighing 666 lbs.
2 hausers for shetes and 2 uptieghes weighing 152 lbs.

Sum of bastard thread 708 lbs.

Delivery of cordell for la Rodecoy

And for making 2 hausers of bastard Brydeport thread for the King's ship called la Rodecoy. For handeropes weighing 109 lbs. and delivered to John Maykyn the master of the said ship there by the said Roger in the month and year aforesaid.

Sum of bastard thread 109 lbs.

Delivery of Cordell to la Gabrielle

And for making 6 hausers of bastard Brydeport thread for the King's barge called la Gabrielle. For 2 upteighs 2 pairs of Hevederopes and 1 pair of forsteies and 1 truserop weighing 456 lbs. and delivered to Robert Andrew the master of the same ship by the same Roger in the month and year aforesaid.

Sum: bastard thread 45 lbs.

Delivery of Cordell for the James

And for making 4 hausers of bastard Brydeport thread for 3 couples of hevederopes 2 shetes and 2 lollers thereof made for the King's ship called La James.

And delivered to Walter Ruddock master of the same ship by the same Rodger the month and year aforesaid weighing 345 lbs.

Sum of bastard thread—345 lbs.

Delivery of Cordell for La Maudeleyne

Sum of bastard thread—559 lbs.

The same for the Godbyfore—Robt mate. Sum of bastard thread 157 lbs.

The same for New St Mary—sum of bastard thread—219 lbs.

For the ship La Phe—Bartholomeu Stygy master 16th August 34th year at the tower of London: sum of white thread 2349 lbs. bastard 1288 lbs.

For La Thomas delivered to Walter Norman Master at the same place on 20th March 35th year white thread 744 lbs.—bastard 1498 lbs.

For La Edward delivered to John Grene master on the 7th August in the 25th year at the same place white thread 1520 lbs. bastard 2813 lbs.

For la Nawe Seinte Marye to John Ramm the master for a voyage with the Prince to Gascony in September 36th year.

White thread 1794 lbs.

Bastard 838 lbs.

For the James delivered to John Makyn master for the same voyage on the same date. White thread 1000 lbs. Bastard 2110 lbs.

For the Gabrielle to Robert de Hulle the master for the same voyage on the same day, white thread 1000 lbs. Bastard 2110 lbs.

Cordell for la Thomas, to Walter Normal, master in October year 36 sum of white thread 728 lbs.

Cordell for the Edward to John Greene master, at the same time. Sum of white thread 484 lbs.

Mr J. T. Tinniswood's notes on the account

May 1953

Notes on E. 101/27/16. 32–37 *Edw. iii*

The later failure of our hemp industry to support the growing Tudor Navy led to dependence on imports and the embarrassment of politicians; the cordage problem became similar to that of Baltic masts. The Bridport trade was protected by Parliament in 1529, apparently with small result; a project to grow hemp in Lincolnshire was finally written off in 1558; another effort to obtain independence in 1573 also failed.[1] Mainwaring, reflecting early seventeenth-century opinion, ranks Mediterranean cables as the best, 'made of the whitest stuff', Flemish and Russian next, our own last.

Caggynges, kedges. The weight of her kedging cable indicates that the *New St Mary* was a large ship, but the weight of 1516 lb. for one pair of shrouds (*hevedropes*) is an error; 150 lb. would be near the mark.

Trussropes. Several things on shipboard could be 'trussed up'; here the truss ropes are usually in pairs. They occur often, evidence of heavy wear, and so may be translated as ropes 'to trussen up sail', bunt lines or clewgarnets.

Stetinges. Mr Laughten has suggested these were preventer braces, led forward.

Winderop, windlass rope, general purposes messenger.

Shetes. I suggest that this word was applied both to sheets and tacks. Sandahl[2] derives it from O.E. *sceat*, a corner or projection, hence sternsheet of a boat, sheet of a sail; thus a rope led to the sheet of the sail might be either sheet, tack, or both. There was only one sail, requiring but two sheets, yet there are two instances in these lists of the issue of four sheets (*New St Mary*'s tender and *Godbeit*), and four sheets can be found elsewhere. The two extra *shetes* were really tacks, I think. As negative evidence, I have not found any other word translatable as tacks.

Buoyropes. The medieval seamen had plenty of these. He had no capstan, his windlass was slow, and so he was accustomed to buoy his anchor and pick it up by means of the ship's boat and the buoy rope. The boat had a lash-up or permanent davit in the bows for the purpose, and the anchor commonly had a ring at its crown, to which the buoy rope was made fast. The near vertical pull obtainable on the fluke fetched it out of the ground with comparative ease, of course. The snag in the scheme was that the ring was apt to be broken when the anchor hit the bottom, causing its gradual abandonment in Tudor times when anchors became heavier and capstans became available. The upright fluke of an 'Admiralty' pattern anchor was dangerous to other ships in

1 Oppenhein, *Administration of the Royal Navy*.
2 *Middle English Sea Terms*, p. 78.

shallow water, so the buoy continued to serve as a marker; also, it was an elementary precaution to use it when anchoring over foul ground. There is no doubt that, a thousand years on, someone, will still be buoying his 'Admiralty' anchor.

Stays. Mentions of one stay, one pair of forestays, or of three stays indicate forestays. There was usually a pair, put about the masthead like a pair of shrouds, and set up to a single point at the stem. When a third forestay was present, its lead was perhaps to the bowsprit. Backstays were in pairs to assist the shrouds, being set up slightly abaft them or just inboard of them (when in this position they were later called *swifters*). The complexity and number of backstays naturally varied with the size of the ship. The pendant was called here the *polancrerope*, having the large block termed a *polancre* at the end of it, while the runner and/or fall was the *rivesynge* (*rope*) as it made fast to the *rivesynges* or 'rising-timbers', heavy fore and aft planks along the timberheads above the deck.[1] We may infer that there were no channels.

Bowlines. The notices of two bowlines are interesting as they indicate the use of sail-bowlines at this date. Up to *c.* 1350 there was normally only one bowline used, I believe, to cat the anchor, the bowsprit being the cathead.

Lollers remain a mystery.

Up-ties were to hoist and support the yard. The fourteenth century ties and halliards differed little if at all from their counterparts in Tudor ships of similar size (except for changes in the position of their knight).

Ryfferop, for the bonnets of the *Godbeit*. Medieval sails were reefed from the foot upwards, not from the yard downwards. The sail had rows of small reef-points, and I think the heavy 'reef-ropes' were used to help secure the bags of canvas resulting from a reefing operation. When several reefs had been taken in, the foot of the sail must have been a nuisance to all concerned, and so *c.* 1350 they began to get rid of it and the reef-points altogether, the lower part of the sail being made detachable and called the 'bonnet'. The *Godbeit* had 'bonnets', so we may take it that she had at least two detachable sections—bonnet and drabler. The *ryfferop* is still there, however, and it is only a guess to suggest that it laced course and bonnet together.

Forlock has several meanings, all elusive. At the making of a sail for a barge at London in 1295 it was the first rope mentioned, conceivably the boltrope.

THE ARMED SHIPS OF DOVER

By M. A. N. Marshall

Like Folkestone and Hastings, Dover also fitted out ships for defence against the enemy during the eighteenth-century hostilities. A correspondent at that time, 1779, lamented that 'we have now two French privateers stationed to cruise between Beachy Point and Dover to intercept the trade going up and down the Channel. There is not even a cutter, or a frigate, to molest them; and not withstanding this, our wise and virtuous administration will neither buy, nor hire, nor suffer our privateers to go out against them, and we may very soon expect to have our vessels cut from their moorings.'

But soon after this we have better news, 'Sunday evening last, between seven and eight o'clock, two French privateers made their appearance off Dover; a frigate, two cutters, and an armed brig immediately gave chase, and it was supposed they came up with the privateers about 11 o'clock that evening as a very great firing was heard till four in the morning.' The French privateers were captured and brought into port. The correspondent had no need to lament for we hear also at that time that 'a small privateer belonging to Mr Bond, of Dover, brought into that port five sail of French ships, with 36 prisoners. They were taken off the coast of Calais and Dunkirk. This was her third cruise; and in her second she took one ship laden with malt, and burnt a small one laden with cordage near Calais harbour.'

1 See Sandahl, p. 85, for examples of 'rising-timbers'.

As hostilities progressed we hear, in 1781, that a 'Dutch man of war of 50 guns was taken off Dover, and brought into that port'. In January 1783 we hear that 'a French shallop was drove on shore on Romney Sands by a cutter belonging to Dover, *Le Musquetaire*, of Dunkirk.' In March 1794 another newspaper record informs us that 'six more Danish and Swedish ships are taken and sent in here by our cruizers, in consequence of the late orders to bring up all vessels bound to whatever ports they may, and laden with ammunition, naval or military stores and provisions'. In 1799 we hear that 'Captain Bazely of Dover, in company with another vessel has captured two Danish East Indiamen, and carried them into the Downs.'

The owners of these ships were the local boatbuilders, mariners, and merchants. Members of the family of Dover bankers, Minet and Fector, were also shipowners.

The following were the principal armed ships from 1778 to the end of the century:

Active. 200 tons, 18 (6 lb.) carriage guns, 24 swivels, 90 crew. Captain William Watson.
Owners. Henry Ladd, Thomas Walker, Captain William Watson.

A newspaper record of 1778 states that 'the Active privateer of 18 guns, sailed from Dover Pier on a cruize. Going out of the pier, she saluted the spectators with a discharge of her guns, which was returned by the repeated huzzas of a vast concourse of people which had assembled together on that occasion.' A record of 1779 states, 'we hear that the Active privateer, Captain Watson, of Dover, has taken a French West Indiaman, laden with rum, sugar, and indigo, which she has brought into that port, and said to be worth 50,000 L.' A record of March 1779 states 'arrived at this harbour *L'Amiable Gertrude*, a fine ship of 300 tons, Captain Lethuillier, from S. Domingo to Bordeaux, with a valuable cargo on board, a prize to the *Active* privateer, Captain Watson of this port.' Later, in 1779, there was advertised the sale of *L'Amiable Gertrude*, 300 tons, taken by Captain Watson and condemned as a prize. Her cargo consisted of 330 hogshead of clayed and muscavado sugars, 250 bags of cotton, 50 bags and 73 casks of coffee. In 1782 the *Active* was put up for sale at The City of London Inn and Coffee House, Dover, 'the cutter, *Active*, almost new, built at Folkestone, about 200 tons burthen, with 18 six pounders, and 2 twelve pounders, with all her ammunition and stores, fit for immediate service. The said vessel being a remarkable fine sailor was fitted out at Dunkirk as a privateer with a commission from the French King to John Chitty, but was taken going down the Channel by His Majesty's ships, *Buffalo*, *Bienfaissant*, and *Crocodile*, and the *Scourge* and *Helena* sloops, and condemned as a lawful prize.'

Adventure. 60 tons, 8 (8 lb.) carriage guns, 6 swivels, 20 crew. Captain John Igglesden.
Owners. Robert Thompson, merchant.

Adventure. 60 tons, (6 lb.) carriage guns, 12 swivels, 30 crew. Captain Joseph Moore.
Owners. Henry Thomas, merchant.

Adventure. 50 tons, 4 (3 lb.) carriage guns, 6 swivels, 20 crew. Captain George Marshall.
Owners. Richard Paterson, George Gray.

Adventure was put up for sale at the Coffee House, Dover, in 1782.

Alexander. 95 tons, 10 (2 and 3 lb.) carriage guns, 6 swivels, 3 masts, 30 crew. Captain James Boxer.
Owners. Henry Baker, Captain James Boxer.

Alice. 30 tons, no carriage guns, 6 swivels, 3 masts, 25 crew. Captain John Richards.
Owner. Captain John Richards.

Assistance. 160 tons, Captain Stephen Watson.

Assistance shallop. 50 tons, 4 (6 lb.) carriage guns, 4 swivels, 2 masts, figure head, 20 crew. Captain William Pringle.
Owner. Robert Thompson, merchant.

Assistance. 60 tons, 8 (4 lb.) carriage guns, 8 swivels, 20 crew.
Owners. John Ridley, Robert Thompson, merchants.

Black Prince. 30 tons, no carriage guns, 6 swivels, 3 masts, 20 crew. Captain Stephen Watson.
Owner. Captain Stephen Watson.

Bridgetown 260 tons, 8 (12 and 4 lb.) carriage guns, 4 swivels, 2 decks, 3 masts, a woman's head, 18 crew. Captain John Goodwin *owner.*

British Hero. 200 tons, 16 carriage guns. Captain John Wellard.
Owner. Henry Ladd, shipbuilder.

In 1782 this ship was on sale at the Coffee House, Dover, 'The *British Hero* cutter, 200 tons, a remarkable fine sailor, almost new, employed as a privateer under the command of Captain John Wellard, with 16 guns, 18 pounders, carriages,. . . fit for immediate service.'

Charlotte. 45 tons, 2 (4 lb.) carriage guns, 10 swivels, 3 masts, 24 crew. Captain William Husband.
Owners. Henry Ladd, William Bond, George Box, John Wright, merchants, and Captain William Husband.

The ship traded between Dover and Guernsey with provisions.

Dart. 80 tons. Captain Osmond Beauvoir.

Dolphin. 92 tons, 6 (3 lb.) carriage guns, 4 cannonades, 35 crew. Captain Richard Norwood.
Owners. Peter Fector, James Peter Fector.

Dolphin, lugger, 38 tons, 2 (4 lb.) cannonades, 4 swivels. 15 crew. Captain Andrew Hall.
Owners. Peter Fector, James Peter Fector.

Drake. 129 tons.
Owners. Thomas and John King.

Duke of York. Row boat privateer.

In 1793 there was the record that this privateer 'has taken and sent into Dover two French fishing boats which she took off Dieppe'.

The Echo. 20 guns.
Owners. Thomas King. This ship was launched in September 1797.

Fancy. 50 tons, 8 (4 lb.) carriage guns, 8 swivels, 30 crew. Captain Thomas Elve.
Owners. Thomas Southcombe.

Fox. 51 tons, 8 carriage guns. Captain Stephen Bedbroke.
Owners. John Eastwick, Joseph Wills, mariner.

Fox. 69 tons, 4 cannonades. Captain William Blake, *owner* of the ship.

Good Intent. 50 tons, 10 (4 lb.) carriage guns, 12 swivels, 40 crew. Captain Isaac Mowle, *owner* of the ship.

Good Luck. 60 tons, Captain Reginald Mantell.

Helena. 230 tons, 16 (6 and 4 lb.) carriage guns, 20 swivels, 60 crew. Captain William Sherraton.
Owners. Captain William Sherraton, John Arnett, ropemaker, William Major, Phineas Jacobs, of Folkestone.

The ship traded with Lisbon for wines.

Henniker. 30 tons, 2 (2 lb.) carriage guns, 8 swivels, 25 crew, 3 masts. Captain Abraham Hubbard, also *owner.*

Job. 100 tons, 12 (4 lb.) carriage guns, 12 swivels, 40 crew. Captain Henry Pascall.
Owners. Henry Ladd, Captain Samuel Kemp.

This cutter was put up for sale in 1779 described as 'a prime sailor, exceedingly well found'.

Joseph. 70 tons, 10 (3 lb.) carriage guns, 8 swivels, 2 masts, 25 crew. Captain Isaac Stunt.
Owner. Joseph Willes, merchant.

Kent. 95 tons. Captain James Boxer.

Kite. 70 tons, 6 (2 lb.) carriage guns, 24 swivels, 40 crew. Captain George Boxer, also *owner*.
The ship traded between Dover and North Bergen with provisions.

Mars. 60 tons, 6 (6 lb.) carriage guns, 4 swivels, 3 masts, 50 crew. Captain Thomas Gibbs, also *owner*.

Martha. 60 tons, 10 (3 lb.) carriage guns, 8 swivels, 20 crew. Captain Robert Steriker.
Owners. James Gravener, Thomas King, merchants.

A newspaper record of 1782 states that the '*Martha*, Letter of Marque, Captain Robert Steriker, took the Adventurer privateer of Dunkirk'. Later, this prize was on sale at the King's Head Tavern, Dover, 'condemned as a prize to the *Martha*'.

Morning Star. 54 tons, 6 (2 lb.) carriage guns, 8 swivels, 30 crew. Captain Thomas Wilkinson, also *owner*.

Nancy. 47 tons, 6 (2 lb.) carriage guns, 6 swivels, a plain head, 20 crew. Captain Edward Norwood.
Owners. William Mellish, Captain Edward Norwood.

The *Nancy* appears to have been a hired cutter; a record of 1794 states that the '*Nancy* hired armed cutter, Henry Watson, master, belonging to this place is supposed to be taken by the enemy; she was sent with dispatches to Lord Hood, and went into Hieres Bay, supposing the British Fleet to remain there, when she was taken by four French frigates, when lay there with English colours.'

Nile, lugger. 124 tons, 14 (6 lb.) carriage guns. Captain John Blake.
Owners. William Crow, William Pepper, Thomas Fitch.

This lugger appears to have been built in 1799 when there was a newspaper record stating, 'there is a beautiful new lugger fitted out here, the *Nile*, pierced for 18 guns'.

Phoenix. 112 tons, 12 (3 lb.) carriage guns, 12 swivels, 50 crew. Captain William Dougherty.
Owners. Joseph Luddington, sail maker, Captain William Dougherty.

A newspaper record of 1781 states 'arrived the *Phoenix* cutter from a cruize, and has brought in with her a French privateer of six guns and fifty men. She belonged to Dunkirk, sails very fast, and is almost new from the stocks'.

Rachael. 30 tons, no carriage guns, 8 swivels, 60 crew. Captain Thomas Latimore.
Owners. Captain Thomas Latimore, Cornelius Jones, merchant.

Ranger. 40 tons, 6 (2 lb.) carriage guns, 6 swivels, 20 crew. Captain Edward Harpham.
Owner. Richard Denne, of Lydd.

Ratler. 123 tons.
Owner. Peter Fector.

Resolution. 200 tons, 12 (6 lb.) carriage guns, 20 swivels, 60 crew. Captain John Osborne.
Owners. Captain John Osborne, Thomas King, ship-builder.

The ship traded between Dover and Guernsey to take in cargoes of wine for London.

Resolution. 80 tons, 8 (4 lb.) carriage guns, 14 swivels, 30 crew. Captain Thomas Bradshaw.
Owners. Messrs Taylor and Co.

Revenge. 110 tons, 8 (12 and 4 lb.) carriage guns, 4 swivels, 40 crew. Captain George Box, also *owner*.

Revenge. 70 tons, 10 (3 lb.) carriage guns 6 swivels, 3 masts, 40 crew. Captain Isaac Hubbard.
Owners. Edward Popkeis, Michael Beecher, and Captain Hubbard.

Richard and Dolly. 30 tons, 6 swivels, 3 masts, 20 crew. Captain John Davidson.
Owners. Captain Peter Popkeis, Captain John Davidson.

Rodney. 70 tons, 8 (4 lb.) carriage guns, 6 swivels, 3 masts, 40 crew. Captain John Edgerley.
Owners. Benjamin Glansfield, merchant. The ship traded with Lisbon and Gothenberg.

Royal Henry. 50 tons, 8 (6 lb.) carriage guns, 2 swivels, 25 crew. Captain Thomas Minter.
Owners. Daniel Dee, Deborah Jacobs, Richard Norwood.

Rye.

A newspaper record of 1779 states that 'the Dunkirk privateer of six guns of Dunkirk, was taken by the *Rye* cutter of Dover, close in under the Seven Cliffs, on Thursday afternoon, and carried in there; she mistook the *Rye* for a smuggler'.

Shark.

A newspaper record of 1781 states, 'this morning was brought in here by the *Shark* privateer, of Dover, a French lugsail privateer of eight guns belonging to Cherbourg; she had taken several coasting vessels and sent them to France, and had two ransomers on board for 600 L each. By some of the crew we learn that she had been some years in the smuggling trade before she was converted into a privateer, and most of her crew were well acquainted with our coast.' Hastings.

Stag. 50 tons. Captain William Rolfe, the Elder.
Owner. Robert Hore, mariner.

Success.

A newspaper record of 1778 states that 'the *Success*, of Dover, from Norway, is retaken by the Kite cutter, after being five days in possession of the French'.

Surprize. 50 tons, 4 (2 lb.) carriage guns, 6 swivels, 30 crew. Captain Peter Yeames.
Owners. Thomas and John King.

Surprize. 20 tons, no carriage guns, 6 swivels, 3 masts, 20 crew. Captain William Watson, also *owner*.

Swift. 75 tons, 8 (4 lb.) carriage guns, 6 swivels, 3 masts, 30 crew. Captain John Osborne.
Owners. Captain John Osborne, William Richards, Joseph Graves, of London, merchants.

Tartar. 195 tons, 16 (9 lb.) carriage guns, 6 swivels, 50 crew. Captain William Walker.
Owners. Henry Jelley, mariner.

Tartar. 30 tons, 6 swivels, 2 masts, 16 crew. Captain Philo Sanford, also *owner*.

Thetis. 84 tons, 8 (3 lb.) carriage guns, no swivels, 3 masts, 20 crew. Captain Ashtell.
Owner. Richard Jell, sailmaker.

Three Brothers. 40 tons, 6 (3 lb.) carriage guns, 6 swivels, 20 crew. Captain Richard Clement.
Owner. John Edgerley, merchant.

Traveller. 30 tons, 6 (2 lb.) carriage guns, 6 swivels, 12 crew. Captain Richard West.
Owners. Captain John Osborne, of Dover, Richard West, William Richards, of London.

True Briton. 100 tons, 8 (3 lb.) carriage guns, 8 swivels, 30 crew. Captain Lewis Benfield.
Owner. Joseph Stewart, of Sandwich, mariner.

True Briton. 45 tons, 8 (4 lb.) carriage guns, 20 crew. Captain John Ratcliffe.
Owners. John Adam, John Denne, of Lydd, and Captain John Ratcliffe.

True Briton. 40 tons, 8 (4 lb.) carriage guns, 20 crew. Captain William Watson, junior.
Owner. William Watson, the Elder.

Two Brothers. 65 tons. Captain Thomas White.

NOTES

LIEUTENANT ROBERT HOOD, R.N.

Robert Hood was born in 1797 at Portarlington, when his father the Rev. Richard Hood (1769–1836) was probably a master at the school there. In 1803 Richard Hood became Perpetual Curate of Heywood, Lancashire, and was headmaster of Bury Grammar School from 1820 to 1823. He was a man of some scientific ability. He is said to have been a connexion of Admiral Sir Samuel Hood. (Passing Certificate, P.R.O., Ad 6/117., H. A. Green, Heywood Notes and Queries, Manchester, 1908–9.)

Nothing is known of the early life of Robert Hood. He possibly went to Bury Grammar School because the family did not live in Heywood. He entered the Navy in 1809, and his service (AD 6/117 and Steele's Navy List) was as follows:

Ship	Guns	Commander	Rank	Entry & Discharge	Station
Melopène	38	Peter Parker	Vol. 1st class	5. ii. 09–20. x. 09	Spithead
Eagle	74	Charles Rowley	Vol. 1st class & midshipman	9. xii. 09–19. x. 10	Spithead
Impérieuse	38	Thomas Garth	A.B. and mid.	20. x. 10–7. xi. 12	Cadiz
Thames	32	Charles Napier	Midshipman	8. xi. 12–29. xii. 12	Mediterranean
Sultan	74	John West	A.B. and mid.	30. xii. 12–21. iv. 13	Mediterranean
Cephalus	18	Edward Flin	A.B. and mid.	28. iv. 14–29. ix. 14	Mediterranean
Glasgow	42	Henry Duncan	Midshipman	16. x. 14–19. ix. 16	Portsmouth
Spey	20	John Lake	Midshipman	20. ix. 16–11. x. 16	Spithead

He was then paid off. His service totalled six years and six months. He was examined for Lieutenant at the Cape of Good Hope on 12 October 1816. He presented certificates from Captains Brady, Furneaux and Murray, besides the captains mentioned above. The officers who examined him referred to 'journals which we have never seen surpassed'.

In 1819 he joined, as Admiralty midshipman, Lieutenant John Franklin's expedition by land to the Arctic Coast of North America. This expedition went down the Coppermine River, charted the North American coast from the mouth of that river as far as Point Turnagain in the east and returned via the Great Slave Lake. Hood was shot through the head from behind by Michel, an Indian voyageur, when they happened to be left alone in the camp. It is doubtful whether he would have survived much longer, even if he had not been murdered; he was so weak through starvation that he could hardly stand up. (Franklin, J., *Narrative of a Journey to the Shores of the Polar Sea*, London, 1823.)

Franklin wrote of his 'zealous and able co-operation', his scientific ability, the high standards of his maps and drawings (some of which were reproduced in Franklin's *Narrative*), and 'the excellent qualities of his heart'. He was the first person to prove satisfactorily the effect of the aurora on the compass needle.

In Bury Parish Church there is a tablet which reads:

'Sacred to the memory of Lieutenants Robert and George Hood, R.N. sons of the Rev. Richard Hood, LL.D. of this town, the former of whom while engaged in the overland Arctic Expedition under the command of Captain Franklin, R.N., after having with unshaken fortitude endured unparalleled dangers and privations and by his skill in science essentially contributed to the utility of the enterprise, was assassinated by an Iriquois, October 20th, 1821 and thus terminated at the early age of four and twenty a short but brilliant career distinguished by varied talent and sturdy determination which were rapidly opening a path to the highest honours of his profession.'

Hood's River on the north coast of America was named after him by Franklin.

His elder brother, Richard, died in 1809 at the age of 15. His younger brother, George, was born in 1799 and entered the Navy in 1812. He died of fever on the east coast of Africa, on 26 February, 1823, when he was serving with Captain Owen on a voyage of exploration. It was only after his death that his commission as Lieutenant was received. Port Hood in Delagoa Bay was named after him.

A. G. E. JONES

REAR-ADMIRAL SIR HOME POPHAM

Acting on information received I went to the church of St Michael and All Angels at Sunninghill, near Ascot, to take photographs of Sir Home Popham's tomb and monument. It consists of a plinth (in Portland stone) and a 'broken' column (for a life cut short), surmounted by an urn and 'flames' (for remembrance).

On the four sides of the base are engraved 'Copenhagen', 'Buenos Ayres', 'North Coast of Spain' and 'Cape of Good Hope' respectively; and the west panel of the plinth contains a representation in carved stone of two signal flags, a semaphore with two arms working, and an open book, presumably Popham's *Telegraphic Signals or Marine Vocabulary* from which Nelson's historic signal was taken. The epitaph on another panel is entirely eroded by time and weather and is indecipherable. The vicar, however, kindly drew my attention to *A History of Windsor, Sunninghill and the Great Park*, by G. M. Hughes, 1890, which fortunately includes a full account of the inscription, as follows:

'In memory of Rear Admiral Sir Home Riggs Popham, K.C.B., K.C.G., K.M., F.R.S., who died at Cheltenham September 11th 1820 aged 58 years. Affection's fondest terms are found too weak to state his conduct as husband or a father, and as a friend 'twere difficult to do him justice, yet memory retains what language fails t'express. His public services were great and various but those let history tell. This page posthumous has to record still nobler triumphs, these his great success excited envy and envy persecution but both were foil'd in their attempts upon his character, for Truth was supreme and Justice found the verdict while he added most feelingly this last, the best and strongest confirmation—forgiveness.'

On another panel the monument records:

'Here also rests the remains of Lady Popham widow of Sir Home, she died at her residence 12 Portland Place Bath on the 12th March 1866 in her 95th year, having survived her husband forty five years. Also to the memory of Catharine Mary eldest daughter of Admiral Packenham[1] and grand-daughter of Sir Home and Lady Popham, died April 5th 1878, aged 60.'

The *D.N.B.* is unsatisfactory as containing no details of Popham's more private life, his wife and family, nor of his place of burial. The vicar is mystified why he should have been buried at Sunninghill, having died at Cheltenham, and having apparently no ties with this neighbourhood. The *D.N.B.* does not mention that Popham was a Knight of Malta, and the 'K.C.G.' is to me at least an unsolved enigma. It is interesting to see that posterity was sufficiently appreciative of Popham's work in the field of signalling to have adorned his monument with the flags, semaphore and code book.

HILARY P. MEAD

THE PISA SHIPS

When I visited Pisa in September 1954, it was for the express purpose of examining the bas-reliefs of ships on the Duomo (Cathedral) and the Campanile (Leaning Tower), since there had been considerable discussion in the *Mariner's Mirror* on these two sets of ships.[2] I wanted to attempt to determine at first hand whether the stones bearing the ships had come from earlier structures, or whether there was a possibility that the reliefs had been sculptured or perhaps altered after the

1 John Pakenham. See O'Byrne.

2 *M.M.*, Notes: R.H.D., May 1952; George M. Cunha, November 1952; G. B. Rubin de Cervin, August 1954.

buildings had been completed. Cunha[1] has suggested that the relief was carved on the Campanile after it was completed in the middle of the fourteenth century, and de Cervin[2] considers that the slab bearing the ships was let into the Duomo after it was completed.

I first examined the relief of the two ships on the Duomo, since this building had been started in 1063, over a hundred years before the Campanile foundation was laid. It had been previously pointed out that while these ships were of Roman style, they were probably copied from some Roman sculpture, since there was a pointed arch in the lighthouse, and this type of arch was not generally used until after the 11th century.[3]

Before visiting Pisa, the idea had occurred to me that perhaps the pointed arch had been carved on an original Roman sculpture at a much later date. Indeed, as I examined the construction of the Duomo, it seemed very possible that the ships were Roman. All over the lower part of the back end of the structure were blocks of stone of different composition from the stone generally used in the rest of the structure. The two main corner columns on both sides of the apse had many blocks bearing Roman inscriptions, some upside down, some running vertically. Since the block bearing the ships of Roman style is only a few yards away from Roman inscriptions and architectural fragments, the possibility of a Roman origin seemed strong. The fact that the ships were running up the wall seemed to strengthen this supposition.[4]

The ships are found on the right pier of a niche which probably was originally designed to hold a statue or a bust. There is a similar niche on the opposite side of the apse in the same place, and there are three on the curved part of the apse. The piers of the two side niches (one bearing the ships) are all built in the same manner. The front is composed of a thin (4 in. to 5 in.) slab, with another block behind to obtain the depth. The piers are all surmounted by rather ornate capitals which carry the Roman arch forming the top of the niche.[4]

It is the capital over the ships in question which furnishes the answer to the whole problem. Close examination of the capital and stone slab on which the ships are found seemed to indicate conclusively that the ships were carved after the pier and the capital were in place. In finishing off the background the sculptor cut away the lower projecting part of the capital, so that when compared with the adjacent capital, part of the lower detail is missing.[5] Thus de Cervin is wrong in his assumption that the stone was let in after the Duomo was completed. He undoubtedly made this assumption on the basis of the unorthodox vertical arrangement of the ships.

The pointed arch is not much help in dating this work, since it came into existence at about the same time the Duomo was started. This arch actually becomes a paradox in itself. The early architecture of Pisa was Romanesque and took on the characteristics which subsequently became known as the 'Pisan style'. All of the arches on this group of Pisan buildings are pure Roman, even though some of the structures were not finished until the fourteenth century. It is difficult to see how anyone working on the Pisan monuments could have put a pointed arch on any sculpture. It would thus seem that some conqueror of Pisa was perhaps responsible for this work. The implication of de Cervin that it was executed in the nineteenth century hardly seems possible. At any rate, since this work is definitely a rather late copy of some Roman work, it has little actual value, for the ships shown are well known from original sources. The details of the lower ship have been omitted in most instances. The most interesting point about this work is the fact that it would have been regarded as Roman if it had not been for the brilliant observation of G. B. Rubin de Cervin regarding the arch.

The pair of ships on the Campanile presents quite another situation. In the first place, these

1 G. M. Cunha, *M.M.*, November 1952.
2 G. B. R. de Cervin, *M.M.*, August 1954.
3 *Ibid.*
4 The orientation of the ships is excellently shown in *M.M.*, May 1952, pl. 2.
5 *Ibid.* This is shown in the *M.M.*, May 1952, photographed quite clearly, as white areas at the bottom of the right capital. Comparison with the left capital shows that the lower details of the left capital project past the pier, while on the right they are flush. It is interesting to note that the white blotch in the centre of the lower sail is a chip caused by shrapnel of World War II.

ships are not an intaglio as de Cervin[1] suggests but rather are in relief. There can be little doubt that these ships were carved at the time the lower part of the structure was built, since the background of the ships is flush with the surrounding curved blocks, while the ships and tower are raised. The composition of the stone is the same as that of the surrounding blocks. The ships are located just to the right of a niche over the door leading into the tower. Five courses below the ships is a mythological animal motif, and just under the animals is the date A.D. 1174 at the beginning of an inscription. There is an identical animal relief to the left of the door in the same location, but neither an inscription nor ships are to be found here.

Cunha felt that the ships were carved in the middle of the fourteenth century after the tower had been completed. It is well known that construction on the tower had to be stopped in 1233 due to the heavy list suddenly taken in the tower. In view of this, de Cervin logically argues that the ships must date from between 1174 and 1233. After a critical examination of the ships, it seems that we are justified in dating them *c.* 1174.

The leaning tower is composed of six rows of arcades on top of a heavy base, and work was temporarily stopped at the third arcade. The ships are slightly above the middle of the base. There can be no logical argument against dating these ships *c.* 1174, since they are only a few feet above the date carved into the structure.

This fact makes these ships one of the most important representations we have of this type of craft, since they are firmly fixed both historically and chronologically. To the best of my knowledge, they are the earliest known examples of the so-called 'nef' type of ship.

We have numerous examples of these two-masted lateen ships from thirteenth-century sources. The ships shown in the thirteenth-century Ravenna mosaics are of this type.[2] This design of ship is perhaps better known from Spanish sources. Six Spanish ships of this type from the last part of the thirteenth century are shown by Moll.[3] This Pisa example extends our knowledge back just about 100 years.

The so-called 'nef' type of ship of the thirteenth century usually has a plain hull without the fore and aft castles which began to be added to most northern single-masted ships of this period. Neither the Ravenna ships nor the six Spanish nefs have any castles. However, Moll does show two fourteenth-century ships of this type with well-formed castles.[4] These Pisa ships have castles at both ends, somewhat similar to those apparent on northern single-masters of the same period. Anderson has shown an illustration of a fifteenth-century Turkish ship with an after castle which is almost identical to that of the Pisa ships.[5] The rigging and hull details of this Turkish ship and the Pisa ships are so similar that they must have been almost identical.

The mainsails of both Pisan ships are set and the mizens are furled, just as with the Ravenna ship under sail. I have previously pointed out that this is a characteristic way of sailing these ships.[6] The mainmasts are characteristically taller and raked forward. The mizenmasts are almost vertical. Both masts have tops, as do the Ravenna and other similar thirteenth-century ships. It is interesting to note that in one of the Spanish ships reproduced by Moll there is a ladder shown reaching from slightly aft of the mainmast to the main top.[7] This is of the same proportions as the disputed Ravenna ladder.[8] It might seem to indicate that perhaps such a ladder was carried on these ships for the purpose of reaching the tops.

1 G. B. R. de Cervin, *M.M.*, August 1954.

2 An interesting discussion of the Ravenna ships was recently carried out in the *Mariner's Mirror*: R. H. Dolley, *M.M.*, November 1952, pp. 315–18, pl. I; R. LeB. Bowen, jr., *M.M.*, August 1953, pp. 224–7; R. H. Dolley, *M.M.*, February 1954, pp. 76–7; R. LeB. Bowen, jr., *M.M.*, November 1954, pp. 315–20.

3 F. Moll, *Das Schiff in der bildenden Kunst* (Bonn, 1929), pl. G-6, fig. h-9; pl. G-8, fig. i-12; pl. G-11, fig. o-8.

4 *Ibid.* pl. B-X-e, fig. 145; pl. G-10, fig. n-25.

5 R. and R. C. Anderson, *The Sailing Ship* (New York, 1947), p. 110.

6 R. LeB. Bowen, jr., *M.M.*, November 1954, pp. 315–20.

7 Moll, *op. cit.*, pl. G-8, fig. i-12.

8 R. LeB. Bowen, jr., *M.M.*, August 1953, pp. 224–7.

The sails and yards of the Pisa ships seem to be hung from their centres and thus still maintain the early arrangement. Since both starboard and port sides of the ships are shown, it seems that these ships carried steering oars on both sides.

There is little doubt that the ship-and-lighthouse motif had a votive significance in Roman times, as previously suggested.[1] I examined five such designs on mosaics of ships in the Piazzale delle Corporazioni in the ruins of Ostia, the ancient port of Rome. There were also two lighthouses without any ships, making a total of seven towers. Since four of the towers had flames at the top, at least this number were definitely intended to be lighthouses.

One of these Ostia lighthouses shown by itself is a four-storied tower which is so similar to the one carved on the Duomo at Pisa that it seems that the work must have been copied *in toto* from some Roman work. It is difficult to see how de Cervin could claim that the tower on the Duomo at Pisa was three-storied, when his illustration shows it quite clearly four-storied. The lighthouse on the Campanile is three-storied. Since no two of the Ostia lighthouses are similar (some single-storied, some two-storied), it seems that each may have represented a different lighthouse. These mosaics tell the provenance of the merchants from all parts of the ancient world who maintained offices in this square. It was usual to show two ships sailing towards each other, with the lighthouse between them.

There is no doubt that this ship-and-lighthouse motif existed as a votif offering in medieval times. We have the two examples under discussion at Pisa. There are at least three other examples known from medieval times. A twelfth-century mosaic in Venice shows a single-masted lateener sailing towards a three-storied lighthouse, while another Venetian mosaic from the same period shows a two-masted lateen ship sailing past what appears to be a three-storied lighthouse.[2] A thirteenth-century miniature shows two ships sailing towards each other with a two-storied lighthouse in the centre.[3]

RICHARD LEBARON BOWEN, JR.

BITTACLE AND BINNACLE

The suggestion made by Lieutenant-Commander Waters (*M.M.* 1955, p. 208) that the last two letters of 'bittacle' or 'binnacle' are derived from 'lee' (shelter) can hardly have been meant to be taken seriously. The 'le' is not even pronounced in a manner suggestive of 'lee', but more or less an 'ul' with the vowel almost mute. There are several words ending in 'acle' miracle, pinnacle, tentacle etc.—and these are invariably derived from Latin forms ending in 'aculum'. If 'bittacle' were a word of native English origin one would expect to find something similar in the other Teutonic languages, but this is not the case; whereas the Latin languages all use names very closely allied to our own.

Had I believed that 'bittacle' and 'binnacle' were indeed words made up from Middle English elements, I should have been tempted to drag in the Scots 'butt' and 'ben' or the Dutch 'buiten' and 'binnen' and suggest that one meant a compass on deck and the other below. In that case it would be for me to be accused, quite rightly, of putting forward an argument in which I did not really believe.

R. C. ANDERSON

MEDIEVAL PLANKING HOLDFASTS

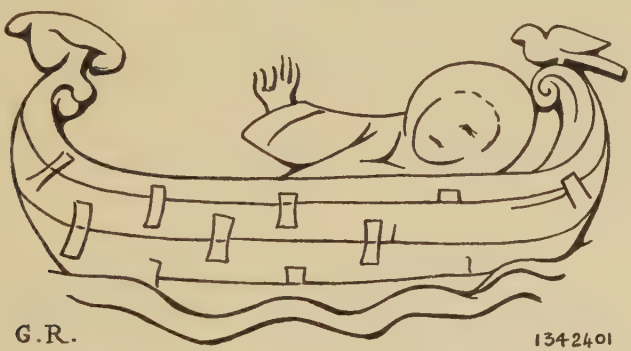
In the *M.M.*, May 1955, on p. 162 Mr R. Morton Nance, describing a fifteenth-century copper navicula, calls the attention to clamps set astride the seams to fasten planks together, an unusual feature. As there is little—if any—evidence of the system having been used in Western shipbuilding, the natural surmise, as I said in a previous note, on the strength of analogous anomalies, is that this was an addition by the artist, taken from non-marine carpenter or joiner work.

1 G. B. R. de Cervin, *M.M.*, August 1954.
2 Moll, *op. cit.*, pl. B-X-e-, figs. 128, 145.
3 *Ibid.* pl. G-19, fig. k-23.

But this is no more than a surmise and should not preclude us from reviewing other hypotheses: I think one of those which one finds on looking closer into the matter is worth keeping a lookout for further enlightenment.

Among the few instances of like clamps which I chance to have on file, the oldest belongs to the first half of the fourteenth century. The boat (see figure) is part of the bas relief coat of arms of D. Grenier, bishop of Pamiers, in St Antonin's chapel in the Jacobins church, Toulouse; the chapel was completed prior to 1342. The sculpture may thus be posterior to the time when the exchange took place between the respective ship-building techniques of the Mediterranean and of Western and North Western Europe.

There is little likelihood that the clamp fastening had ever been used with clinker planking. It would have been redundant where planks were satisfactorily held together by rows of rivets. It could hardly work. To stick by the side, the clamps ought to have been bent at right angles, 'bayonet' wise, at the edge of the upper plank, a profile favouring their elastic extension instead of the desired rigid fastening. To serve their purpose the clamps ought to have their ends clenched inside the planking, an uneasy process. A line of such incisions through thin planking would have risked for splitting along the grains of the wood and certainly did not appeal to carpenters.



On the contrary, one would readily associate the use of such clamps with carvel planking. The fact that they are shown in Western type boats may be explained in several ways. Shipbuilders may have designed this arrangement to retain the mutual fastening of adjacent planks which they were accustomed to ensure in the clinker method. More likely it came from the Mediterranean with the carvel process. Or, maybe, from there it was taken by the artists, who, in drawing ships, sometimes mixed Mediterranean and non-Mediterranean features. (In the Toulouse boat, while the general lines are those of a post-Viking ship, the end scrolls may well be reminiscent of heads or sterns in Roman nautical iconography.) The question which naturally follows is: are such clamps to be found in medieval lateeneers? The most widely known pictures of same do not show them, as far as I can remember, and I have not at hand, at the time of writing, the materials for closer investigation, and cannot settle the point just now.

The interest of the matter is that it might give a little bit of evidence regarding the genesis of the Mediterranean navies of the fourteenth century, of which pretty little is known. It is plain that these ships embodied a mixture of the Roman and kindred tradition with elements from the East beyond Suez, but more precision is hardly available. From how far in the East came the past influences? Their original areas may well extend far beyond the admitted Arab sphere. There are more than suggestions that the fore parts of these lateen navies, instead of having a stem, were shaped like those of Chinese junks: the clamps, which are usual in the planking of these junks, would add a further presumption of relationship.

St Antonin miracle, in the coat of arms of D. Grenier, bishop of Pamiers, St Antonin chapel, Jacobins church, Toulouse.

(The legend of St Antonin, who suffered martyrdom at Pamiers, is about the same as that of St Vincent, as the result of which ravens have been enjoying the freedom of the cathedral church of that name in Lisbon: the remains of the martyr, which had been thrown into the sea, were miraculously salvaged by birds.) L. GUILLEUX LA ROËRIE

CONVEYING ORDERS TO GUNS

In his review of Dillon's Narrative (*M.M.*, August 1954), Mr A. H. Taylor refers to the question raised by Professor Lewis as to the method of conveying orders to the guns.

Two instances of orders being passed by messenger occur to me.

In the account in Vol. 27 of the *Mariner's Mirror* of the capture of the *Ardent* in 1779 the following appears at p. 125. 'He (Mr Willis the fourth lieutenant) did not realize that the ensign had been struck and he was puzzled when, shortly after going below again, he received orders by William Murray that no more guns were to be fired.' The account records that William Murray was a 13-year-old midshipman.

The second instance is found in the *Memoirs of the Life and Services of Sir J. Theophilus Lee* who was present at the Battle of the Nile in the *Swiftsure* and stated that during the battle he acted as aide-de-camp to Captain Hallowell. Lee's account of the battle (written in the third person) continues 'Captain Hallowell, observing an appearance of fire in the mizzen chains of *L'Orient* ordered young Lee to run below and desire Lieut. Waters, the Hon. F. Aylmer, Davis and Mudge to point every gun that would bear upon this spot, to which also the musketry of the marines stationed upon the poop under Capt. Allen was directed, with a view of preventing the enemy from extinguishing the conflagration; and with such effective results that all their efforts to subdue it were rendered unavailing by the slaughter which the concentrated fire of the *Swiftsure* produced.' Lee at this time was aged 10 years and 11 months. ALLAN E. BAX

THE BEGINNING OF THE S.N.R.

In the article in the November number (1955) the name of Captain Henry T. A. Bosanquet M.V.O., R.N., should have been recorded. He was present at the meeting at the R.U.S.I. on 14 June 1910, when the Society was founded, and at that meeting was appointed one of the two Hon. Auditors. He held the post, with a break in 1920, till, on the death of Sir Geoffrey Callender in 1948, he became Hon. Treasurer.

He was from the first one of those who kept the society going. My memory is often sadly at fault and it so happened that his name did not turn up in any letters or records. I hope this belated acknowledgement may make amends. ALAN MOORE

QUERIES

1. (1956.) The loss of Pitt Cutter. A churchyard in the island of Guernsey contains a tombstone which commemorates the loss of *Pitt Cutter* on 26 November 1819 at a point north of Hanois Rock. The vessel was on a voyage from Jersey to Falmouth. Ten of the eleven persons buried, and whose names appear on the tombstone, are women. I shall be most grateful for information regarding this incident. E. A. WORTHY

2. (1956.) Sambuks or sanbuks. During a recent appointment in Aden, I had opportunity to study Arab craft. Being no linguist, I used to board vessels with a friend who was one of the best Arabic speakers among the expatriate Government staff. We had always referred to certain classes of craft as 'sambuks', but, one day, he noticed that a nakhuda we were speaking to said 'sanbuk'. He asked him to spell the word, and he was emphatic, and so were members of his crew, that it was spelt with an 'n'. Our enquiries were interrupted soon afterwards by illness, and I was never able to resume them.

The word 'sanbuk' or 'sambuk', whichever it is, is used to describe three distinct types of vessel in the Gulf of Aden. These are:

(1) A comparatively large cargo vessel, with a high, almost rectangular transom, which is built extensively at Ma'alla, Aden. The craft on board which the above observation was made was one of these. Small editions, with a capacity of less than a given number of bags of grain, although otherwise similar, have a different name, which I cannot recall.

(2) A double-ended, sewn beach boat, with a hard chine amidships. These are used for fishing off beaches from Shuqra, a town east of Aden, at least as far east as Qamr Bay.

(3) A double-ended beach boat similar to no. (2), but with a round bilge and of nailed construction. This was used from Aden to Perim. I believe the design was the result of Aden builders, used to nailed construction, being asked to copy imported sewn boats.

I should be interested to learn whether any other member can confirm that the word is spelt with an 'n'. One always sees it printed as 'sambuk', but it takes a keen ear to distinguish 'n' from 'm' in Arabic conversation.

W. A. KING-WEBSTER

3. (1956.) LISTS OF WOODEN MEN-OF-WAR. Were Commander Rupert Jones's lists of wooden men-of-war, originally printed somewhat haphazardly in several issues of *Notes & Queries*, ever published separately with omissions made good? I enquire as, for example, I cannot find particulars of the following 74's, though they may be tucked away in some issue I have not seen: *Arrogant*, *Excellent*, *Irresistible*, *Bombay Castle*, *Robust*, *Sultan* (old), *Sceptre*, *Conqueror* (new), *Repulse*, *Berwick* (new), *Minden*, *Cressy*, *Rodney*.

DERRICK L. ROSSITER

ANSWERS

17. (1935.) *ROYAL LOUISE* AND *ADELAIDE*. In this query information was sought about the *Royal Louise*, stated to have been built in 1831 'according to the design of the English model frigate *Adelaide*'. In 1947 Dr R. C. Anderson pointed out that the 'miniature frigate' *Royal Adelaide* had not been built until 1833 (*M.M.* Vol. 33, p. 277).

The following account of the launch of the *Royal Louise* appears at p. 213 of the *Nautical Magazine* for June 1832: 'The *Royal Louise*, a most beautiful model of a 32-gun frigate, intended as a present to the King of Prussia, was launched on 1st May at Woolwich. The ceremony of naming the vessel was performed in the presence of several hundred spectators by the Lady of Oliver Lang Esq. the Master Shipwright. The whole of the inside of the vessel is of polished mahogany; her cabin is inlaid with plate glass, and her stern is surmounted with a beautifully executed figure of a black eagle, the national emblem of Prussia. She is copper-bottomed and fastened. Her length is fifty-five feet six inches; breadth, twelve feet, depth in hold, eight feet ten inches. Her register tonnage, thirty tons.'

The presentation to the King of Prussia is reported in the August 1832 number of the same magazine at p. 329. 'The model frigate which was recently built as a present to the King of Prussia was formally delivered over to His Majesty on 23rd of June by Lord Fitzclarence near the Isle of Peacocks on the lake formed by the Havel. The whole court was on board the frigate during the ceremony of her being presented and expressed their delight at the beauty of her fittings.'

ALLAN E. BAX

21. (1955.) *FAVORITE*. In Steel's Navy List for 1807 two ships of this name are listed, one a sloop and both of 18 guns. Both were in commission. In the Rupert-Jones's *Navalis* one is stated to have been built in 1806 and later became a surveying vessel.

T. D. MANNING

21. (1955.) *H.M.S. FAVOURITE*. H.M.S. *Favourite*, 18-gun ship sloop, with quarter-deck and forecastle. Built at Bailey's Yard, Ipswich. 427 tons (B.O.M.) Armed with 16 32-pr., 2 6-pr. and 6 18-pr. carronades. Carronades were not then classed as part of the gun-armament of course and although she had, in effect, 24 guns, she was classed for rating as an 18-gun sloop. In the

reorganized rating of 1816, together with many of her sisters, she was re-rated, more realistically as a 24-gun 6th Rate. She was broken up in 1821 without having had a change of name, as the enquirer had supposed. H.M.S. *Julia* and *Sappho* were sister-ships of *Favourite*. The name of the builder, incidentally, is spelled Bayley in some contemporary records. W. JACQUES STEEPLE

21, 22. (1955.) *H.M.S.* FAVOURITE AND *SEAGULL*. The following information is taken from a MS. List of the Navy which belonged to Sir Richard Bickerton in 1810. The volume is dated 1809 on the binding, and has amendments as late as 1813.

Favorite (sic). Ship-rigged sloop. Built at Ipswich 1806. L (G.D.) 108–9½, (K) 91–8⅝; B 29–8; D 9–0. 427 tons. 16 32-pr carronades on upper deck. 6 18-pr carronades on quarter deck. 2 18-pr carronades on forecastle. Built on the lines of the old French *Amazon*. Name ruled through and noted 6th rate. *Note*. In other cases where a name is ruled through there is a note that the ship was lost or sold, but there is no such note in this case.

Julia. Brig. Built at Ipswich 1806. L (G.D.) 93–1; (K) 76–1¼; B 26–6; D 12–0. 284 tons. 14 24-pr carronades on upper deck. 2 6-pr guns on forecastle.

Sappho. Brig-rigged sloop. Built at Ipswich 1806. L (G.D.) 100–3, (K) 77–6½; B 30–6; D 12–9. 384 tons. 16 32-pr carronades and 2 6-pr guns on upper deck.

Seagull. The only *Seagull* is a brig-rigged sloop noted as having been taken from the French in 1808. L (G.D.) 98–5, (K) 79–11⅝; B 28–4⅝; D 12–10. 343 tons. 14 24-pr carronades and 2 9-pr guns on upper deck. Perhaps this ship was refitted at Harwich before being taken into the navy.

Drake. Brig-rigged sloop. Built at Harwich 1808. L (G.D.) 89–3, (K) 72–10½; B 24–7½; D 11–0. 235 tons. 8 18-pr carronades and 2 6-pr guns on upper deck.

Jasper. Brig-rigged sloop. Built at Harwich 1808. L (G.D.) 90–0, (K) 73–3; B 24–7; D 11–0. 237 tons. 8 18-pr carronades and 2 6-pr guns on upper deck.

Onyx. Same as *Jasper* (keel 73–7).

Rosario. Same as *Jasper* (keel 73–5½; depth 11–2; 236 tons.)

CHARLES G. PITCAIRN-JONES

22. (1955.) According to Rupert-Jones's *Navalis* the *Seagull*, a brig sloop of 18 guns, was built in 1804. She surrendered to the Dutch *Lugum* off the Naze and sank on 19 June 1808. No mention is made of her place of building. T. D. MANNING

22. (1955.) *H.M.S.* SEAGULL. H.M.S. *Seagull* of 1809 was not built at Ipswich but was a French prize, rated as an 18-gun sloop of 343 tons in the British service, being formerly *La Sylphe*, captured in 1808. The previous *Seagull* had been a 16-gun brig sloop of 284 tons, built at Dover in 1805 and captured off The Naze, Norway, by the Danish 20-gun sloop *Lougen* and six gunboats in 1809. She was sunk but was later weighed by the Danes and commissioned in their Navy. Apparently, therefore, *La Sylphe* was renamed to fill the gap in the name occasioned by the loss of the above vessel, and there would appear to be little possibility that the Ipswich vessel could have been named *Seagull* since the interval between the loss of the one vessel and her replacement in name was so narrow. At any rate I have not come across her name as building at Ipswich in any official lists.

Sloops built at Ipswich in this year (1808) were H.M.S. *Hope*, *Jasper*, *Drake*, *Rosario* and *Onyx*, all belonging to a numerous class of 10-gun brig sloops of a new type designed by Peake and irreverently known as 'coffin brigs' from their high rate of casualties. Many of them, or their successors, were later employed in peace time as coastguard and packet vessels.

Since Mr Moffat mentions the names of all vessels mentioned above except H.M.S. *Hope*, and for that substitutes *Seagull*, it would appear that it was actually the same vessel, though I cannot trace any record of her having borne the latter name.

The previous H.M.S. *Hope*, 14-gun brig sloop, formerly the *Dutch Star*, captured in 1795, had been sold out of the Service in 1807. W. JACQUES STEEPLE

24. (1955.) In my experience, sailing ship sailors generally spoke of the Horn among themselves, in ships, but they might well write Cape Horn if they wrote anything. The use of Cape

Horn is not unusual in titles of sea-books. I called one *By Way of Cape Horn* myself and, years later, discovered that someone else had done the same thing before me. I used Cape Horn in that case because it was clearer and sounded better. There were at least British and French square-riggers named *Cape Horn*—I remember a big Frenchman called *Cap Horn*. But I have not heard of any ship ever called just plain *The Horn*.

28. (1955.) Mails from Sydney. It was common for sailing-ships to clear for 'Guam for Orders' from Melbourne when I was a boy. Nobody imagined they were going there. I recall the practice particularly during the earlier years of the First World War. 'Guam for orders' appeared to be used when it was not intended to publicize the actual destination of the ship.

28. (1955.) Mails from Sydney. The practice of clearing for Guam was mentioned in Vol. 3 (1913) in answer to a Query headed 'Seekers'. The information given on p. 61 was supplied by my father, though it was signed with my initials. 'Vessels sailing to look for a freight and wishing to keep their destination secret used often to clear for Guam, a place where, of course, there was no employment to be had.'

R. C. ANDERSON

29. (1955.) Setting of stunsails. I should imagine that the way the studding-sails were set in the French painting means nothing more than that they happened to be set that way under those sailing conditions during a particular commanding officer's term in command of the frigate represented. Or maybe the frigate just happened to be short of stuns'l gear or cordage, or stuns'ls themselves. Or they were just trying out that balance of the canvas, to have the ship steer and handle better. I do not think this was a usual way to set stuns'ls in H.M. ships, or any other ships, unless experience showed that a particular ship handled best with the sails set that way when the wind was aft.

ALAN VILLIERS

31. (1955.) Pram. I would suggest that at Bristol in 1853 the ferry 'prame' was Norwegian. These boats made excellent ferry-boats in places where their bows could run far onto a shelving bank or beach, thus making it easier for a passenger to get in or out of them dry-shod without a gangboard. They were so used for a very long time at Hayle Ferry in west Cornwall, and I remember being told there, *c.* 1890, that when a new one was wanted it was ordered from the carpenter aboard one of the Norwegian timberships that came there regularly in the old days, and he would knock one together on the next voyage, much more cheaply than it could be built locally.

R. MORTON NANCE

REVIEW

The Anatomy of Nelson's Ships. By C. Nepean Longridge. Percival Marshall and Co., 1955. 9½ × 7 *inches*; 294 *pages*; 12 *plans*; 76 *plates*; 183 *drawings in the text*. £3. 3*s*. 0*d*.

The title of this very handsome, but alarmingly expensive, book is a little misleading; it is not so much a treatise on the shipbuilding methods of Nelson's time as an account of how Dr Longridge made his well-known model of the *Victory*, and a guide-book with which other model-makers can follow in his footsteps, if they have the skill and patience required.

Dr Longridge's two volumes on his model of the *Cutty Sark* were reviewed in the *M.M.* in 1933. After finishing that job he went on to the more difficult one of making a really first-class model of the *Victory* in her Trafalgar state, or perhaps it would be more correct to say in her state after the restoration of 1923–9. He tells us incidentally that he finished the hull early in 1939, but served afloat during the war and was not able to resume work until 1945. Before his death in 1952 he had completed a very detailed description of his model and its construction and this has now been published with a really magnificent collection of illustrative drawings and photographs.

Plan no. 8, for instance, shows the mass of rigging in the neighbourhood of the foretop far more clearly than any drawing or photograph that I have seen elsewhere.

It is surprising, to me at least, that Dr Longridge should recommend starting a model right way up with its keel resting on a block tapered to give the proper amount of trim by the stern. In my experience it is better to work with the keel uppermost until the hull has been planked up as far as the lower wales; this makes the fitting and fixing of the planks very much easier. While on the subject of planking it may be mentioned that the book is a little misleading as regards thickness. It tells us that the bottom planking was 5 in. or 6 in. thick and that this was reduced progressively upwards to 3 in. 'at the top', but appears to ignore the thicker strakes below the lower wales and to make the actual wales of a thickness corresponding to $7\frac{1}{2}$ in. instead of 9 or 10, while the thinnest planking is to be 'not less than 3/32 in.' which would represent $4\frac{1}{2}$ in. on the 1/48 scale.

Dr Longridge's chief sources of information—apart from the ship herself—seem to have been the drawings made in connexion with her restoration and Steel's two books, *Naval Architecture* and *Rigging and Seamanship*. He does not mention Mr Laughton's long report on his Search among Admiralty Records, published in the *M.M.* in 1924. In at least one instance the use of this would have explained an apparent discrepancy between Steel's figures and what is to be found in the ship as rerigged. According to Dr Longridge 'Steel does not give the length of the jibboom in relation to any other spar' and makes the flying jibboom very much shorter and very much thicker than that now fitted. The explanation is simple. What Steel called the flying jibboom was what we now call the jibboom; the third spar was not officially introduced until 1794, just as Steel's book appeared. The Report gives chapter and verse for this (p. 190) and for the transference of the word 'flying' a stage further outboard. It also shows that the ship as now rigged has her flying jibboom projecting exactly as far as was laid down, though it is longer than one would expect, because its heel has been extended aft to the bowsprit cap. No doubt there was good reason for believing that this improvement came in before 1805.

Although anyone who has made and rigged a model knows that a certain amount of 'cheating' is inevitable, I feel that Dr Longridge's dodge of making masts with swivelling heads, as described on p. 162, goes a little too far. Others will probably have similar objections to various details and may even be able to point to an occasional mistake, but there will surely be general agreement that the book is a success and that those model-makers who like things 'cut and dried' should be very grateful to its author and to Mr Bowness and Mr Campbell, whose illustrations add enormously to its value.

R. C. ANDERSON

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WINDLESHAM,
SURREY.

FOUDROYANT COMMITTEE. *See previous page.*

Printed in Great Britain at the University Press, Cambridge (Brooke Crutchley, University Printer)